# SAMPLE PAPER TERM - 1 (2021-2022) CLASS: XII SUB: ENGLISH CORE (301) TIME ALLOWED: 90 MINUTES. MAX. MARKS: 40 General Instructions:

1. This paper is divided into three parts:

A- Reading B -Writing C-Literature

2.Section A-READING has 18 questions. Attempt a total of 14 questions, as per specific instructions for each question.

3.Section B-WRITING SKILLS has 12 questions. Attempt a total of 10 questions, as per specific instructions for each question.

4. Section C-LITERATURE has 30 questions. Attempt 26 questions, as per specific instructions for each question.

5.Each question has four possible answer **a**, **b**, **c** and **d**. Students are required to choose the most appropriate answer out of the four alternatives.

6. All Questions carry equal marks.

7. There is no negative marking.

# **SECTION- A (READING)**

# 1. Read the passage given below. (8X1=8)

1. All of Earth's oceans share one thing in common "plastic pollution. When people litter, or when the trash is not properly disposed off, things like plastic bags, bottles, straws, foam and beverage cups get carried to the sea by winds and waterways. About 80 per cent of ocean plastic originates on land. The rest comes from marine industries such as shipping and fishing.

2. In 2015, engineer Jenna Lambeck at the University of Georgia and other researchers calculated that at least 8 million tons of plastic trash are swept into the ocean from coasts every year. That's the equivalent of a full garbage truck of plastic being dumped into the sea every minute. If current trends in plastic production and disposal continue that figure will double by 2025. A report published by the World Economic Forum last year predicts that by 2050, ocean plastic will outweigh all the fish in the sea.

3. In today's world, plastic is everywhere. It's found in shoes, clothing, household items, electronic and more. There are different types of plastics, but one thing they all have in common is that they are made of polymers, large molecules made up of repeating units. Their chemical structure gives them a lot of advantages: they are

cheap and easy to manufacture, lightweight, water-resistant, durable and can be molded into nearly any shape

4. Sea turtles eat plastic bags and soda-can rings, which resemble jellyfish, their favourite food Seabird eat bottle caps or chunks of foam cups. Plastic pieces may make an animal feel full, so it doesn't eat enough real food to get the nutrients it needs. Plastic can also block an animal's digestive system, making it unable to eat.

5. Plastic and its associated pollutants can even make it into our own food supply. Scientists recently examined fish and shellfish bought at markets in California and Indonesia. They found plastic in the guts of more than a quarter of samples purchased at both locations, in organisms that people eat whole, such as sardines and oysters that means we're eating plastic too. In larger fishes, chemicals from plastic may seep into their muscles and other issues that people consume.

6. One way to keep the ocean cleaner and healthier is through clean-up efforts. A lot of plastic waste caught in ocean currents eventfully washes up on beaches. Removing it prevents it from blowing out to sea again. Beach clean- up is ocean clean- up.

7. Clean-up efforts can't reach every corner of the 'ocean or track down every bit of micro-plastic. That mean it's critical to cut down all the amount of plastic that reaches the sea in the first place. Scientists are working towards new materials that are safer for the environment. For example, Jambeck and her colleagues are currently testing a new polymer that breaks down more easily in seawater.

# Based on your understanding of the above passage, answer the given questions by choosing the most appropriate word. Answer <u>any eight</u> out of the ten questions given below:

# Q1. Percentage of ocean plastic that originates from land is.....

- a) 20%
- b) 50%
- c) 80)
- d) 25%

# Q2. Plastic is that biodegradable because it is made up of.....

- a) Low Atomic particle
- b) Tiny particles
- c) Strong big particle

d) Large molecule polymers

# Q3. Scientists bought fish and shellfish for examination at markets in:

- a) China and Russia
- b) Pakistan and Afghanistan
- c) California and Indonesia
- d) Australia and Brazil

# Q4. Which properties make great plastics for consumer goods

- a) Biodegradability
- b) Durability
- c) The dyes and flame retardation
- d) Ability of chemical absorption

# Q5. What is the ultimate way to clean-up an ocean?

- a) The beach –clean up
- b) Ban of plastic items
- c) Prohibition of seabirds
- d) No food supply in surrounding area

# Q6. How are the larger fish affected by plastic?

- a) They can get entangled in plastic netting
- b) Plastic may lead them to starvation
- c) Plastic is found in their guts
- d) Plastic may go into their muscles and other tissues

# Q7. Which features do all kinds of plastics have?

- a) Easy to manufacture and easy to dispose
- b) Water resistant
- c) Difficult to mould into any shape
- d) Non-durability

# Q8. What is the biggest impact of plastic pollution on sea life?

- a) Plastic eating makes them feel full
- b) Plastic blocks the animals' digestive system
- c) Plastic cuts sea animal's skin
- d) All of these
- Q9. Clean-up efforts can't reach every corner means......
  - a) It is easy
  - b) It is fun
  - c) It is difficult
  - d) It is difficult to achieve fully

Q10. Jambeck and her colleagues are currently testing a new polymer. What is the property that the polymer has?

- a) Breaks down more easily in milk
- b) Breaks down more easily in water
- c) Breaks down more easily in seawater
- d) Breaks down more easily in tap water

# 2. Read the passage given below and answer following questions. (6X1=6)

1. The India has the highest population growth rate in the world. Already the second most populous, it is expected to grow by 25% by 2036 according to the National Commission on Population. The growth rate wasn't always like this. In 2011-2020 decade, the growth rate slowed down to 12.2% almost half of what was projected, with further deterioration in the 2021-31 decade to around 8.4%. According to the projections, India likely overtake China as the most densely populated country in the world by 2031 making every fifth person the world, an Indian.

2. There are many reasons as to why this is. To be specific, increase in the birth rate and a decrease in the death rate, higher life expectancy due to advancements in medical technology and practices, better family planning methods.

3. Unemployment and poverty are the chief effects of this phenomenon. Usually, if the population increases the number of jobs and the employment rate increases. But in the case of India, the lack of opportunities and resources has been progressively troublesome. Around 31% of Indians live in urban settlementswhich is slated to increase to 39% by 2036. Historically, when the population of a city increases so much in such a short time, the quality of life drastically reduces. That is, unless the city's administration is capable to cater to the incoming immigrant and their needs, it will surely be a sorry state of affairs.

4. Over the last couple of decades, the fall in the population rate can be attributed in part to the falling fertility rates in women. In 2011, the average TFR (Total Fertility Rate) was 3.5 and 3.7 for women from UP and Bihar respectively. Whereas in the south like Kerala and Andhra Pradesh have TFRs below 2. Expert suggest that TFRs will continue to fall, eventually ending up at 1.73 by 2036. This coupled with the death rate increasing from 7.2 to 7.3, with a net loss in the population – the numbers fall.

5. While yes, it might seem that the population growth rate is falling momentarily, it will most definitely not be the case in the future. With advancement in technology, there will be a stark difference in the quality of life experienced by the people, and with this comes newly generated demand for a skilled workforce. This will ultimately feed back into itself and decrease the death rate and the increase the birth rate in the country. Is this a good thing, or should we be worried about this? You decide.



#### Q11. The growth rate wasn't always like this. This statement means:

- a) The rate was faster before and has now spiked up
- b) The rate was faster before and has now slowed down
- c) The rate was fast and has remained the same
- d) None of these

#### Q12. In the year 2031, India is like to:

- a) Become the most popular
- b) Become the most prosperous
- c) Become the most populous
- d) Become the most pretentious

#### Q13. The contributing factors to population growth rate slowing down are:

- a) Increase in birth and decrease in death rate
- b) Advancement in medical technology and practices
- c) Better family planning methods
- d) All of these

# Q14. Why does population explosion affect India in a different way?

- a) The cities are overcrowded
- b) There is a dearth of opportunities
- c) There is scarcity of sufficient resources
- d) All of these

# Q15. The quality of life decreases dramatically in a city due to the inefficiently of the city's administration.

a) Partially incorrect

- b) Totally incorrect
- c) Partially correct
- d) Totally correct

# Q16. The growth of the technology will help in .....

- a) Increasing skill level in people
- b) Increasing the number of educated people
- c) Increasing the quality of life of people
- d) None of these

Q17. There will be a stark difference in the quality of life experienced by the people due to.....

- a) Advancement in communication
- b) Birth of new language
- c) Advancement of technology
- d) Birth of more children
- Q18. What is the newly generated demand related to a skilled workforce?
  - a) Demand for skilled workforce decreases
  - b) Demand for a skilled workforce increases
  - c) Demand for a skilled workforce remains stable
  - d) Demand for a skilled workforce waver

#### SECTION - B (CREATIVE WRITING SKILLS)

III Answer any four out of the five questions given below: (NOTICE in BLOCK LETTERS Heading for subject of information Date Details related to what when and where without using I Name Designation)

# Q19. A notice must contain.....information.

a) Factual

b) Variety of

c) Meeting

d) Object

# Q20. Notice is generally issued for.....

- a) Employees
- b) Everyone
- c) General masses
- d) A specific group

# Q21. Which of the following Classified Advertisement is written by a person in need of a job?

- a) Situation Vacant
- b) To Let
- c) Accommodation wanted
- d) Situation wanted

# Q22. Which of these media is not used for advertisement?

- a) Newspaper
- b) Magazines
- c) Billboard
- d) Notebook

# Q23. What is the word limit for writing an advertisement?

- a) 40
- b) 50
- c) 60

d) 80

IV Answer any six of the seven questions given below:

# Q24. 'Yours Sincerely' is an example of a .....

- a) Closing line
- b) Signature line
- c) Complimentary close
- d) Complimentary line

# Q25. Letters to the editor are written to.....

- a) Newspaper
- b) School
- c) College
- d) Club

# Q26. Write the correct sequence of the following in an article

- i) Clear and accurate content
- ii) Eye-catching title

iii) Paragraph introducing the theme iv) Conclusion

a) i),ii),iii),iiv
b) iv),i),ii),iii
c) ii),iii),i) iv
d) ii),i),iii),ivamusing

# Q27 In which part of a formal letter the key point of the letter is written?

a) Postscript

b) Body

c) opening

d) Closing

Q28.Which of the following is not the correct tone for letter to the editor?

- a) Personal
- b) Amusing
- c) Polite
- d) Formal

Q29 A letter about the rash driving by bus driver is a:

- a) Letter of complaint
- b) Letter to the editor
- c) Official letter
- d) Business letter

Q30.Letters to the editor are written to:

- a) Newspaper
- b) School
- c) College
- d) club

LITERATURE

This section has sub-sections: V, VI, VII, VIII, IX. There are a total of 30 questions in the section.

Direction- Attempt any 26 questions from the sub-sections V to IX.

V.Read the given extract to attempt the questions that follow:

Sadao stopped, Hana at his side, and turned the man's head. They saw the face. 'A white man!' Hana whispered. Yes, it was a white man.

# Q31. What did Dr. Sadao see when he turned the face of the man?

- a. Man with yellow hair
- b. Man with yellow beard
- c. Man showing signs of being tortured

d. All of these

# Q32. In what state was the white man lying?

- a. Unconscious
- b. Dead
- c. Sleeping
- d. Drunk

# Q33. Which part of the body of young man had wound?

- a. Left side of upper back
  - b. Hand and chest
  - c. Both the legs
  - d. Right side of the lower back

# Q34. To which of these the white man belongs to.....?

- a. US Army
- b. US Navy
- c. Japanese Army
- d. Japanese Navy

Q35 What was Hana's reaction? a) happiness

b) hesitation

c) pleasure

d) hesitation and irritation

#### VI. Read the given extract to attempt the questions that follow:

Our sour cream walls, donations. Shakespeare's head Cloudless at dawn, civilized dome riding all cities Belled, flowery, Tyrolese Valley. Open- handed map Awarded the world its world. And yet, for these

Children, these windows, not this map, their world

Where all their future's painted with a fog

#### Q36. What does the expression - sour cream walls- suggest?

a) Display of donated artifacts on the walls

b) Badly maintained walls

c) Wall-to wall furniture

d) A poor choice of paint for walls

Q37. The map of the world in the classroom symbolizes:

a) Hopes and aspirations of the children

b) Travel plans of the school authorities

c) a world that is unconnected to the children

d) interconnectivity within the world

Q38. The expression, Shakespeare's head is an example of

- a) Pun
- b) Satire
- c) Paradox

d) Irony

Q39. In the extract, Future's painted with a fog' suggests that the......

a) Classroom is a foggy as the paint on the walls

b) Beautiful valley is not a part of the children's future

c) Life ahead for the slum children is as unclear and hazy as fog

d) Fog often finds itself in the classroom through broken window

Q40. The extract is from the poem

- a) Keeping Quiet
- b) A Thing of Beauty
- c) My Mother at Sixty-Six

d) An Elementary School Classroom in a slum

VII Read the given extract to attempt questions that follow:

"That ain't money mister, he said, "and if you're trying to skin me, you won't get very far," and he glanced at the cash drawer beside him.

# Q41. The ticket collector suspected Charley for:

a) Tendering old currency

b) Tendering real currency

c) Tendering fake currency

d) None of these

# Q42. Who had sent that "First Day cover and when?

a) Charley, 1890

b) Louisa, 1994

c) Charley's grandfather, 1894

d) Sam, 1894

# Q43. What is the theme of the lesson?

a) Human tendency of escapism because of the harsh realities of the present world

b) Intersection of time and space

c) Theory of escapism

d) A dialogue between a patient and a psychiatrist

Q 44 The genre of the lesson "Third Level" is

a) Science fiction

- b) Tragedy
- c) Fantasy
- d) Historical fiction

Q45 What was Jack's full name?

- a) Walter Braden Jack Finey
- b) Stephen Jone Jack
- c) Ray Douglas Bradbury
- d) None

# VIII. Read the extract and answer the question that follows

"Listening to them, I see two distinct world- one of the family, caught in a web of poverty, burdened by the stigma of caste in which they are born; the other a vicious circle of the sahukars, the middleman, the politicians, the keepers of law, the bureaucrats and the politicians. Together they have imposed the baggage on the child that he cannot put down. Before he is aware, he accepts it as naturally as his father. To do anything else would mean to dare. And daring is not part of his growing up."

#### Q46. Name the lesson and its author

a) The last lesson, Alphonse Daudet

- b) Deep water, William Douglas
- c) Indigo, Louis Fischer

d) Lost Spring, Anees Jung

# Q47. "Family, caught in a web of poverty, burdened by the stigma of caste in which they are born....." identify the poetic device used in the line.

- a) Irony
- b) Metaphor

c) Simile

d) Personification

# Q48. What forces conspire to keep the workers in the bangle industry of Firozabad in poverty?

a) A web of poverty, stigma of caste and a vicious circle of the sahukars, the middlemen, the policemen, the keepers of law, the bureaucrats and the politicians.

b) Bangle making industry, their karams and a God-given lineage

c) The callousness of the society and the political class

d) All of these

# Q49. " And daring is not part of his growing up." why does the author remark this?

a) The fear of the police and lack of the leadership keep them back

b) Before a child is aware, he accepts his poverty and exploitation as naturally as his father

c) Poverty, stigma of caste and a vicious circle of the sahukars, the middlemen, the policemen, the keepers of law, the bureaucrats and the politicians together impose the baggage on the child that he cannot put down

d) All of these

Q50 What bothers the author the most about the bangle makers?

- a) The stigma of caste and poverty
- b) The affluence of the landlords
- c) The behavior of the factory owners
- d) The labour laws

IX. Attempt the following questions :

But after the airport's Security check, standing a few yards Away, I looked again at her, wan, Pale as a late winter's moon and felt that

Q.51 What thought did the poet put away?

- **a)** Of her mother's declining health
- **b)** To wake up her mother
- c) Of leaving her parent's house
- **d)** That she would not be able to bid adieu to her mother

Q52 The example of a metaphor in the above extract is:

- a) Merry children spilling out of their homes
- b) Trees sprinting
- c) Late winter's moon
- d) Both (a) and (b)

Q53 The joyful scene of trees and children did not drive away the poet's painful thought because:

- a) She was feeling emotional
- b) Her mother was looking old and pale
- c) Of her mother's poor health
- d) All of the above

Q54 What is the kind of pain and ache that the poet feels?

- a) Losing her mother
- b) Heart attack

- c) Headache
- d) Children screaming at her

Q55 Choose the option that appropriately describes the relationship between the two statements given below.

Statement 1: The poet knows her mother has aged.

Statement 2: The poet feels the pain of separation.

- a) Beginning-Ending
- b) Cause-Effect
- c) Question-Answer
- d) Introduction-Conclusion

Q56. Why did the servants refuse to help?

- a) Out of fear
- b) Because of superstitions
- c) Because he was an American soldier
- d) All of these

Q57 What do the words 'From fog to endless night' mean?

- a) Bright light outside
- b) Bright future
- c) Hopelessness
- d) Dark and uncertain future of slum from birth to death

Q58 The narrator mumbled-" Oh the wretches"- he said so because after the announcement he find himself

- a) Inadequate
- b) Unfortunate
- c) Confident
- d) Courageous

Q59 The expression "I imagined I would bob to the surface like a cork" implies that

- a) Douglas was afraid to die
- b) Douglas accepted his failure and ultimately death
- c) Though Douglas was frightened he was not out of his wits
- d) Frightened, Douglas was not able to shout for help

Q60 Which figure of speech from those given below is being used by the author, in the line, "What a thunderclap these words were to me!"

- a) Simile
- b) Personification
- c) Metaphor
- d) Hyperbole

# Sample Question Paper CLASS: XII Session: 2021-22 Mathematics (Code-041) Term - 1

Time Allowed: 90 minutes

Maximum Marks: 40

#### General Instructions:

- 1. This question paper contains three sections A, B and C. Each part is compulsory.
- 2. Section A has 20 MCQs, attempt any 16 out of 20.
- 3. Section B has 20 MCQs, attempt any 16 out of 20
- 4. Section C has 10 MCQs, attempt any 8 out of 10.
- 5. There is no negative marking.
- 6. All questions carry equal marks.

# <u>SECTION – A</u>

In this section, attempt any 16 questions out of Questions 1 – 20. Each Question is of 1 mark weightage.

1.	$\sin \left[\frac{\pi}{3} - \sin^{-1} \left(-\frac{1}{2}\right)\right]$ is equal to:	1
	a) $\frac{1}{2}$ b) $\frac{1}{3}$	
	c) -1 d) 1	
2.	The value of k (k < 0) for which the function $f$ defined as	1
	$\left(\frac{1-\cos kx}{x\sin x}, x\neq 0\right)$	
	$f(x) = \begin{cases} \frac{1}{2} & x = 0 \\ \frac{1}{2} & x = 0 \end{cases}$	
	$\binom{2}{2}$ is continuous at $x = 0$ is:	
	13 continuous at $x = 0.13$ .	
	a) <u>+</u> 1 b) -1	
	c) $\pm \frac{1}{2}$ d) $\frac{1}{2}$	
3.	If A = [a <sub>ii</sub> ] is a square matrix of order 2 such that $a_{ii} = \begin{cases} 1, & when i \neq j \\ 0, & when i \neq j \end{cases}$ then	1
	(0, when i = j)	
	A- 15.	
	$[1 \ 0]$ $[1 \ 1]$	
	$ \begin{array}{c c} 1 & 1 \\ \hline \end{array} \\ \\ \\ \hline \end{array} \\ \\ \\ \\$	
	$\begin{array}{c c} c \\ 1 \\ 0 \\ 0 \\ 1 \end{array}$	
		1
4.	Value of k, for which A = $\begin{bmatrix} k & 0 \\ 4 & 2k \end{bmatrix}$ is a singular matrix is:	I
	a) 4 b) -4	

5.	5. Find the intervals in which the function f given by $f(x) = x^2 - 4x + 6$ is strictly increasing:			1
	a) $(-\infty, 2) \cup (2, \infty)$	b) $(2, \infty)$		
	C) (−∞, 2)	d) (−∞, 2]∪ (2, ∞)		
6.	Given that A is a square matrix of	of order 3 and $ A  = -4$ , then $ a $	dj A   is	1
	equal to:			
	a) -4	b) 4		
	c) -16	d) 16		
7.	A relation R in set A = $\{1,2,3\}$ is	defined as $R = \{(1, 1), (1, 2), (2, \dots)\}$	2), (3, 3)}.	1
	Which of the following ordered p	pair in R shall be removed to mak	e it an	
	equivalence relation in A?			
	(1, 1)	b) (1.2)	1	
	$\begin{array}{c c} a & (1, 1) \\ \hline c & (2, 2) \end{array}$	d) (3, 3)		
8.	$\left[ \int \frac{2a+b}{a-2b} \right] = \left[ 4 -3^{-3} \right]$	then value of $a + b - c + 2d$ is:	-	1
	$\begin{bmatrix} 1 & 1 \\ c & -d & 4c + 3d \end{bmatrix}$ $\begin{bmatrix} 1 & 1 \\ c & 1 \end{bmatrix}$			
	a) 8	b) 10	]	
	c) 4	d) -8	]	
9.	The point at which the normal to	the curve $v = x + \frac{1}{x}$ , $x > 0$ is performed	pendicular to	1
	the line $3x - 4y - 7 = 0$ is:	<i>x</i> '		
		-	_	
	a) (2, 5/2)	b) (±2, 5/2)		
10	$\begin{bmatrix} C \\ -1/2, 5/2 \end{bmatrix}$	d) (1/2, 5/2)		1
10.				•
	a) $\frac{x}{\sqrt{1-x^2}}$	b) $\frac{1}{\sqrt{2}}$		
		v1-x2		
	C) $\frac{1}{\sqrt{1+r^2}}$	d) $\frac{x}{\sqrt{1+x^2}}$		
	VITA			
11.	Let the relation R in the set $A = -$	$\{x \in Z : 0 \le x \le 12\}$ , given by R =	{(a, b) :  a –	1
		le equivalence class containing i	, 15.	
	a) {1, 5, 9}	b) {0, 1, 2, 5}		
	с) <i>ф</i>	d) A		
12.	If $e^x + e^y = e^{x+y}$ then $\frac{dy}{dx}$ is:			1
	dx			
	a) e <sup>y - x</sup>	b) e <sup>x + y</sup>	]	
	c) – e <sup>y-x</sup>	d) 2 e <sup>x-y</sup>	]	
1				

13.	Given that matrices A and B are of order 3×n and m×5 respectively, then the		
	order of matrix $C = 5A + 3B$ is:		
	$2 \cdot 3 \times 5$ and $m = n$	b) 3×5	
	a) 3x3 and m = m	d) 5x5	
14.	If y = 5 cos x - 3 sin x, then $\frac{d^2y}{dx^2}$ is	s equal to:	1
	a) - y	b) y	
	c) 25y	d) 9y	
15	<u>г 2 5</u> 1		1
15.	For matrix $A = \begin{bmatrix} 2 & 3 \\ -11 & 7 \end{bmatrix}$ , $(adjA)'$	is equal to:	I
	a) $\begin{bmatrix} -2 & -5 \end{bmatrix}$	b) $\begin{bmatrix} 7 & 5 \end{bmatrix}$	
		<sup>2</sup> , l <sub>11</sub> 2J	
	a) [7 11]		
	$\begin{bmatrix} c \\ l \\ -5 \\ 2 \end{bmatrix}$	[11 2]	
16	$r^2 y^2$		1
10.	The points on the curve $\frac{x}{9} + \frac{y}{16} =$	= 1 at which the tangents are parallel to y-	I
	axis are:		
	$(0 \pm 4)$	b) $(+4.0)$	
	$\begin{array}{c} a) (0, \pm 4) \\ c) (+3.0) \end{array}$	$\frac{b}{(\pm 4,0)}$	
17.	Given that A = $[a_{ii}]$ is a square r	natrix of order 3×3 and $ A  = -7$ , then the	1
	value of $\sum_{i=1}^{3} a_{i2}A_{i2}$ , where $A_{ii}$ denotes the cofactor of element $a_{ii}$ is:		
		6	
	a) 7	b) -7	
	c) 0	d) 49	
18.	If $y = \log(\cos e^x)$ , then $\frac{dy}{dx}$ is:		1
	a) $\cos e^{x-1}$	b) $e^{-x} \cos e^x$	
	c) $e^x \sin e^x$	d) $-e^x \tan e^x$	
19.	Based on the given shaded region	on as the feasible region in the graph, at $2 - 3x + 0y$ maximum?	1
	which point(s) is the objective ful	$\zeta_{10}$ $Z = 5x + 9y$ maximum?	
	Y A		
	+		
	25-		
	2.5 D(0,20)	-	
	(0,10) - 5 + B(5,5) (6)	0,0)	
	Y' (10,0) $y + y = 10$	x + 3y = 60	
	x + y = 10		
	a) Point B	b) Point C	
		a) every point on the line	

ſ	20.	The least value of the function $f(x) = 2cosx + x$ in the closed interval $[0, \frac{\pi}{2}]$		1
		is:		
		a) 2	b) $\frac{\pi}{2} + \sqrt{3}$	
		C) $\frac{\pi}{2}$	d) The least value does not	
_		2	exist.	
		<u>SE(</u> In this section, attempt any 16 Each Question	<u>CTION – B</u> questions out of the Questions 21 - 40. is of 1 mark weightage.	
	21.	The function $f: \mathbb{R} \rightarrow \mathbb{R}$ defined as $f(x) = x^3$ is:		
		a) One-on but not onto	b) Not one-one but onto	
		c) Neither one-one nor onto	d) One-one and onto	
	22.	If $x = a \sec \theta$ , $y = b \tan \theta$ , then $\frac{d^2 y}{dx^2}$	$fat \theta = \frac{\pi}{6}$ is:	1
		a) $\frac{-3\sqrt{3}b}{\pi^2}$	b) $\frac{-2\sqrt{3}b}{2}$	
		$\frac{a^2}{-3\sqrt{3}b}$	$\frac{a}{-b}$	
			, 3\/3a <sup>2</sup>	
-		v la tha air	on smooth, the feasible region for a LDD is	4
	20.	(0, 8) (4, 10) (4, 10) (6, 5) (0, 0) (4, 10) (5, 0) (0, 0) (1, 10) (1, 10)		
	24.	The derivative of sin <sup>-1</sup> $(2x\sqrt{1-x^2})$ a) 2 b) c) $\frac{\pi}{2}$ d)	) w.r.t sin <sup>-1</sup> x, $\frac{1}{\sqrt{2}} < x < 1$ , is: $\frac{\frac{\pi}{2} - 2}{-2}$	1
F	25.			1
		If $A = \begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 1 \\ -4 & 2 \\ 2 & -1 \end{bmatrix}$	$\begin{bmatrix} 2 & -4 \\ 2 & -4 \\ -1 & 5 \end{bmatrix}$ , then:	
		a) $A^{-1} = B$	b) $A^{-1} = 6B$	
		C) B <sup>-</sup> ' = B	d) $B^{-1} = \frac{1}{6}A$	

26.	The real function $f(x) = 2x^3 - 3x^2 - 36x + 7$ is:		
	a) Strictly increasing in $(-\infty, -2)$ and strictly decreasing in $(-2, \infty)$		
	b) Strictly decreasing in $(-2,3)$		
	c) Strictly decreasing in $(-\infty, 3)$ and strictly increasing in $(3, \infty)$		
	d) Strictly decreasing in $(-\infty, -2) \cup (3, \infty)$		
27.	Simplest form of $\tan^{-1}\left(\frac{\sqrt{1+\cos x}+\sqrt{1-\cos x}}{\sqrt{1+\cos x}-\sqrt{1-\cos x}}\right)$ , $\pi < x < \frac{3\pi}{2}$ is:		
	a) $\frac{\pi}{4} - \frac{x}{2}$ b) $\frac{3\pi}{2} - \frac{x}{2}$		
	c) $-\frac{x}{2}$ d) $\pi -\frac{x}{2}$		
28.	Given that A is a non-singular matrix of order 3 such that $A^2 = 2A$ , then value of $ 2A $ is:		
	a) 4 b) 8		
	c) 64 d) 16		
29.	The value of <i>b</i> for which the function $f(x) = x + cosx + b$ is strictly	1	
	a) $b < 1$ b) No value of b exists		
	c) $b \le 1$ d) $b \ge 1$		
30.	Let R be the relation in the set N given by $R = \{(a, b) : a = b - 2, b > 6\}$ , then:	1	
	a) $(2,4) \in \mathbb{R}$ b) $(3,8) \in \mathbb{R}$ c) $(6,8) \in \mathbb{R}$ d) $(8,7) \in \mathbb{R}$		
31.	The point(s), at which the function f given by $f(x) = \begin{cases} \frac{x}{ x }, x < 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	1	
	is continuous, is/are: $(-1, x \ge 0)$		
	a) $x \in \mathbb{R}$ b) $x = 0$		
	C) $x \in \mathbb{R} - \{0\}$ d) $x = -1$ and 1		
32.	If A = $\begin{bmatrix} 0 & 2 \\ 3 & -4 \end{bmatrix}$ and $kA = \begin{bmatrix} 0 & 3a \\ 2b & 24 \end{bmatrix}$ , then the values of k, a and b respectively	1	
	are:		

	a) -6, -12, -18	b) -6, -4, -9	
	c) -6, 4, 9	d) -6, 12, 18	
33.	A linear programming problem is as follows:		
	$Minimize \ Z = 30x + 50y$		
	subject to the constraints,		
	$3x + 5y \ge 15$		
	$2x + 3y \le 18$		
	$x \ge 0, y \ge 0$		
	In the feasible region, the minimum va	lue of Z occurs at	
	a) a unique point b)	no point	
	c) infinitely many points d)	two points only	
34	The area of a transzium is defined by:	function f and given by $f(x) = (10 \pm$	1
54.	The area of a trapezium is defined by $\sqrt{100 - w^2}$ then the area when it is	$\frac{10}{10} + \frac{10}{10} + 10$	1
	$x$ ) $\sqrt{100 - x^2}$ , then the area when it is i	haximised is:	
	a) $75cm^2$	b) $7\sqrt{3}cm^2$	
	$2) 75 \sqrt{2} cm^2$	d) $5cm^2$	
	C) 7575CH	u) 3011	
35.	If A is square matrix such that $A^2 = A$ ,	then $(I + A)^3 - 7 A$ is equal to:	1
	a) A	b) I + A	
	C) $ $ - A	d) I	4
36.	If $\tan^{-1} x = y$ , then:		1
	(a) $-1 \le y \le 1$	b) $\frac{-\pi}{2} \leq y \leq \frac{\pi}{2}$	
	<i>ay i y i i</i>	$b_{1} = y = \frac{1}{2}$	
	$c)  \frac{-\pi}{2} < y < \frac{\pi}{2}$	d) $y \in \left[\frac{-\pi}{2}, \frac{\pi}{2}\right]$	
	$c)  \frac{1}{2} < y < \frac{1}{2}$	u) $y \in \{\frac{1}{2}, \frac{1}{2}\}$	
37.	Let A = {1, 2, 3}, B = {4, 5, 6, 7} and let $f = {(1, 4), (2, 5), (3, 6)}$ be a function		
	from A to B. Based on the given information, $f$ is best defined as:		
	a) Surjective function	b) Injective function	
	c) Bijective function	d) function	
38.	For A = $\begin{bmatrix} 3 & 1\\ 1 & 2 \end{bmatrix}$ , then 14A <sup>-1</sup> is given by:		1
	r—1 71		
	(2) 14 [2 -1]	[4 -2]	
	a) $\left[ 14 \right]_{1}$ 3	$[10^{10}]_{12}$	
	<u> </u>	r_3 _11	
	c) $2\begin{bmatrix} 2 & 1\\ 1 & -3 \end{bmatrix}$	d) $2\begin{bmatrix} 3 & 1\\ 1 & -2\end{bmatrix}$	
	1 0		
39.	The point(s) on the curve $y = x^3 - 11x$	+ 5 at which the tangent is $y = x - 11$	1
	is/are:		
	(2.10) (2.10)		
	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		
40	$[\alpha \beta]$	<i>Γ</i> (-∠, 17) απα (∠, -3)	1
+0.	Given that $A = \begin{bmatrix} \alpha & \rho \\ \nu & -\alpha \end{bmatrix}$ and $A^2 = 3I$ , the	en:	
	L/ J		

	a) $1 + \alpha^2 + \beta \gamma = 0$ b) 1 c) $3 - \alpha^2 - \beta \gamma = 0$ d) 3	$\frac{-\alpha^2 - \beta\gamma = 0}{+\alpha^2 + \beta\gamma = 0}$		
<u>SECTION – C</u> In this section, attempt any 8 questions. Each question is of 1-mark weightage. Questions 46-50 are based on a Case-Study.				
41.	For an objective function $Z = ax + by$ , where $a, b$ the feasible region determined by a set of constr (0, 20), (10, 10), (30, 30) and (0, 40). The condit maximum Z occurs at both the points (30, 30) ar a) $b - 3a = 0$ b) $a = 3b$ c) $a + 2b = 0$ d) $2a - b = 2$	p > 0; the corner points of 1 raints (linear inequalities) are ion on <i>a</i> and <i>b</i> such that the hd (0, 40) is:		
42.	For which value of m is the line $y = mx + 1$ a tana) $\frac{1}{2}$ b) 1c) 2d) 3	gent to the curve y <sup>2</sup> = 4x? 1		
43.	The maximum value of $[x(x-1)+1]^{\frac{1}{3}}$ , $0 \le x \le 2$ (a) 0 (b) $\frac{1}{2}$ (c) 1 (d) $\sqrt[3]{\frac{1}{3}}$	1 is: 1		
44.	In a linear programming problem, the constraints and y are $x - 3y \ge 0, y \ge 0, 0 \le x \le 3$ . The feas a) is not in the first b) is bound quadrant quadrant c) is unbounded in the d) does not first quadrant	s on the decision variables x 1 ible region led in the first t exist		
45.	Let $A = \begin{bmatrix} 1 & \sin \alpha & 1 \\ -\sin \alpha & 1 & \sin \alpha \\ -1 & -\sin \alpha & 1 \end{bmatrix}$ , where $0 \le \alpha \le 2$ (a) $ A =0$ (b) $ A $ (c) $ A  \in (2,4)$ (d) $ A $	π, then:   ε(2,∞)   ε[2,4]		
	CASE STU The fuel cost p to the square the fuel costs and the fixed of 1200 per hour Assume the speed of the train as v km/h.	DY per hour for running a train is proportional of the speed it generates in km per hour. If ₹ 48 per hour at speed 16 km per hour charges to run the train amount to ₹		

	Based on the given information, a	answe	r the following questions.		
46.	Given that the fuel cost per hour is $k$ times the square of the speed the train generates in km/h, the value of $k$ is:		1		
	$ \begin{array}{c c}     a) \frac{16}{3} \\     c) 3 \end{array} $		b) $\frac{1}{3}$ d) $\frac{3}{16}$		
47.	If the train has travelled a distance of 500km, then the total cost of running the train is given by function:		1		
	a) $\frac{15}{16}v + \frac{600000}{v}$		b) $\frac{375}{4}v + \frac{600000}{v}$		
	c) $\frac{5}{16}v^2 + \frac{150000}{v}$		d) $\frac{3}{16}v + \frac{6000}{v}$		
48.	The most economical speed to ru	un the	train is:		1
	a) 18km/h c) 80km/h	b) d)	5km/h 40km/h	-	
49.	The fuel cost for the train to trave	el 500k	rm at the most economica	I speed is:	1
	a) ₹ 3750 c) ₹ 7500	b) d)	₹ 750 ₹ 75000	-	
50.	The total cost of the train to trave	el 500k	m at the most economica	I speed is:	1
	a) ₹ 3750 c) ₹ 7500	b) d)	₹ 75000 ₹ 15000		

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#### Sample Paper -3 Term 1

#### **Subject: Physics**

#### Time: 90 Minutes

Max. Marks:45

#### **General Instructions:**

- **1**.. The Question Paper contains three sections.
- 2. Section A has 25 questions. Attempt any 20 questions.
- 3. Section B has 24 questions. Attempt any20 questions.
- 4. Section C has 6 questions. Attempt any 5 questions.
- 5. All questions carry equal marks.
- 6. There is no negative marking.

#### **SECTION A**

This section consists of 25 multiple choice questions with overall choice to attempt any 20 questions. In case more than desirable number of questions are attempted, ONLY first 20 will be considered for evaluation.

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Q1. If the magnetic lines of force are shaped like arcs of concentric circles with their centre at point O in a certain section of a magnetic field: O



(i) The intensity of the field in this section should at each point be inversely proportional to its distance from point O.

(ii) The intensity of the field in this section should at each point be inversely proportional to square of its distance from point O.

(iii) The intensity of the field in this section should at each point be inversely proportional to cube of its distance from point O.

(iv) Nothing can be said

Q2. A dipole of dipole moment p is kept along an electric field E such that E and p are in the same direction. Find the workdone in rotating the dipole by an angle  $\pi$ .

(i) W = 2Ep	(ii) W = -2Ep
(iii) W = Ep	(iv) W = –Ep

Q3. Two bodies are charged by rubbing one against the other. During the process, one becomes positively charged while the other becomes negatively charged. Then

(i) mass of each body remains unchanged.

(ii) mass of each body changes marginally.

(iii) mass of each body changes slightly and hence the total mass.

(iv) mass of each body changes slightly but the total mass remains the same.

Q4. In series LCR circuit, the phase angle between supply voltage and current is

(i) 
$$\tan \phi = \frac{X_L - X_C}{R}$$

(ii) 
$$\tan \phi = \frac{R}{X_L + X_C}$$

(iii) 
$$\tan \phi = \frac{R}{X_L - X_C}$$

(iv) 
$$\tan \phi = \frac{X_L + X_C}{R}$$

Q5.Acapacitor stores  $10\mu$ C charge when connected across a battery. When the gap between the plates is filled with a dielectric, a charge of  $20\mu$ C flows through the battery. Find the dielectric constant of the dielectric.

(i) 
$$k = 2$$
 (ii)  $k = 4$  (iii)  $k = 3$  (iv)  $k = 1$ 

Q6.Three charges –q, Q and –q are placed at equal distances on a straight line. If the potential energy of the system of three charges is zero, then what is the ratio of Q: q?

(i) 1: 1

(ii)1:2

(iii)1:3

(iv)1:4

Q7. Find the current through the 30  $\Omega$  resistance in the circuit shown.



- (i) 2/6 Ampere
- (ii) 3/6 Ampere
- (iii) 4/6 Ampere

Q8.Kirchhoff's first law is based on the law of conservation of

(i)charge

(ii) energy

(iii) momentum

(iv) sum of mass and energy

Q9.A coil made of copper suspended from a fixed support is oscillating freely. If a magnetic dipole is brought near the coil, the coil will

- (i) Slow down
- (ii) Move faster
- (iii) Move faster or slow down depending on which magnetic pole is facing the coil
- (iv) Continue moving unaffected

Q10.The strength of the magnetic field at a point r near a long straight current carrying wire is B. The field at a distance r/2 will be

(i) B/2 (ii) B/4

(iii) 2B (iv) 4B

Q11.When a ferromagnetic material is heated to temperature above its Curie temperature, the material

- (i) Is permanently magnetized
- (ii) Remains ferromagnetic
- (iii) Behaves like a diamagnetic material
- (iv) Behaves like a paramagnetic material

Q12. The horizontal component of earth's magnetic field at a place is  $\sqrt{3}$  times the vertical component. The angle of dip at that place is

- (i) π/6
- (ii) π/3
- (iii) π/4
- (iv) 0

Q13. The small angle between magnetic axis and geographic axis at a place is-

- (i) Magnetic meridian
- (ii) Geographic meridian
- (iii) Magnetic inclination (iv) Magnetic Declination

Q14.Two coils are placed close to each other. The mutual inductance of the pair of coils depends upon the

- (i) rate at which current change in the two coils
- (ii) relative position and orientation of the coils
- (iii) rate at which voltage induced across two coils
- (iv) currents in the two coils
- Q15.Which of the following magnetic material is temperature dependent?
- (i) Diamagnetism
- (ii) Paramagnetism
- (iii) Feromagnetism
- (iv) None of these

Q16. Combine three resistors 5 Q, 4.5 Q and 3 Q in such a way that the total resistance of this combination is maximum

- (i) 12.5 Q
- (ii) 13.5 Q
- (iii) 14.5 Q
- (iv) 16.5 Q

Q.18For a metallic wire, the ratio V/I (V = applied potential difference, I = current flowing)-

- (i) increases or decreases as the temperature rises, depending upon the metal
- (ii) decreases as the temperature rises
- (iii) independent of temperature
- (iv) increases as the temperature rises

Q19. Two coils are placed closed to each other. The mutual inductance of the pair of coils depends upon

- (i) the rate at which currents are changing in the two coils.
- (ii) relative position and orientation of two coils.
- (iii) the material of the wires of the coils.
- (iv) the currents in the two coils.
- Q20.Lenz's law of electromagnetic induction is as per law of conservation of
- (i) energy.
- (ii) momentum angular.
- (iii) charge.
- (iv) electromotive force.
- Q22.The electric field inside a spherical shell of uniform surface charge density is

(i) zero.

(ii) constant, less than zero.

(iii) directly proportional to the distance from the centre.

(iv) none of the these

Q23.An ac circuit has a resistance of 12 ohm and an impedance of 15 ohm. The power factor of the circuit will be

(i) 0.8

(ii) 0.4

(iii) 0.125

(iv) 1.25

Q24.Choose the correct statement.

(i) A capacitor can conduct a dc circuit but not an inductor.

(ii) In a dc circuit the inductor can conduct but not a capacitor.

(iii) In dc circuit both the inductor and capacitor cannot conduct.

(iv) The inductor has infinite resistance in a dc circuit

Q25.Two cells of emf's approximately 5 V and 10 V are to be accurately compared using a potentiometer of length 400 cm.

(i) The battery that runs the potentiometer should have voltage of 8 V.

(ii) The battery of potentiometer can have a voltage of 15 V and R adjusted so that the potential drop across the wire slightly exceeds 10 V.

(iii) The first portion of 50 cm of wire itself should have a potential drop of 10 V.

(iv) Potentiometer is usually used for comparing resistances and not voltages.

#### SECTION B

This section consists of 24 multiple choice questions with overall choice to attempt any 20 questions. In case more than desirable number of questions are attempted, ONLY first 20 will be considered for evaluation.

Q26.A sinusoidal voltage of peak value 283 V and frequency 50 Hz is applied to a series LCR circuit in which R = 3  $\Omega$ , L = 25.48 mH, and C = 796  $\mu$ F, then the power dissipated at the resonant condition will be-

Q27. A circular loop of radius 0.3cm lies parallel to much bigger circular of radius 20 cm. The centre of the small loop is on the axis of the bigger loop. The distance between their centres is 15 cm. If a current of 2.0 A flows through the smaller loop, then the flux linked with the bigger loop is

- (i) 3.3 X 10-11weber
- (ii) 6 X 10-11weber
- (iii) 6.6 X 10-9weber
- (iv) 9.1 X 10-11weber

Q28.If both the number of turns and core length of an inductor is doubled keeping other factorsconstant, then its self-inductance will be-

- (i) Unaffected
- (ii) doubled
- (iii) halved
- (iv) quadrupled

Q29. A current passes through a wire of nonuniform cross section. Which of the following quantities are independent of cross-section?

(i)free electron density

(ii)drift velocity

(iii) the charge crossing

(iv)current density

Q30. For measurement of potential difference, a potentiometer is preferred over voltmeter because

- (i) potentiometer is more sensitive than voltmeter.
- (ii) the resistance of potentiometer is less than voltmeter.
- (iii) potentiometer is cheaper than voltmeter.

(iv) potentiometer does not take current from the circuit.

Q31. A circular current loop of magnetic moment Mis in an arbitrary orientation in an external magnetic field B. The work done to rotate the loop by 30° about an axis perpendicular to its plane is

(i) MB

(ii) √3MB/2

(iii) MB/2

(iv) zero

**Q32.** A short bar magnet has a magnetic moment of 0. 65 J T<sup>-1</sup>, then the magnitude and direction of the magnetic field produced by the magnet at a distance 8 cm from the centre of magnet on the axis is

(i)  $2.5 \times 10^{-4}$  T, along NS direction (ii)  $2.5 \times 10^{-4}$  T along SN direction (iii)  $4.5 \times 10^{-4}$  T, along NS direction (iv)  $4.5 \times 10^{-4}$  T, along SN direction

Q33. A circular coil of radius 4 cm and of 20 turns carries a current of 3 amperes. It is placed in a magnetic field of intensity of 0.5 weber/m<sup>2</sup>. The magnetic dipole moment of the coil is

- (i) 0.15 ampere-m<sup>2</sup>
- (ii) 0.3 ampere-m<sup>2</sup>
- (iii) 0.45 ampere-m<sup>2</sup>
- (iv) 0.6 ampere-m<sup>2</sup>

Q34.Gauss's law will be invalid if

- (i) there is magnetic monopoles.
- (ii) the inverse square law is not exactly true.
- (iii) the velocity of light is not a universal constant.
- (iv) none of these.
- Q35.. SI unit of permittivity of free space is
- (i) Farad
- (ii) Weber
- (iii) C2N-1 m-2
- (iv) C2N-1 m-2

Q36. Four equal charges q are placed at the four comers A, B, C, D of a square of length a. The magnitude of the force on the charge at B will be



(ii) 
$$\frac{(1+2\sqrt{2})q^2}{2\times 4\pi\varepsilon_0 a^2}$$

(iii) 
$$\frac{4q^2}{4\pi\varepsilon_0 a^2}$$
(iv) 
$$\frac{\left(\frac{2+1}{\sqrt{2}}\right)q^2}{4\pi\varepsilon_0 a^2}$$

Q37. Which of the following graphs shows the variation of electric field E due to a hollow spherical conductor of radius R as a function of distance from the centre of the sphere?



Q38.When there is an electric current through a conducting wire along its length, then an electric field must exist

(i) outside the wire but normal to it.

(ii) outside the wire but parallel to it.

(iii) inside the wire but parallel to it.

(iv) inside the wire but normal to it.

Q39. In an alternating current circuit consisting of elements in series, the current increases on increasing the frequency of supply. Which of the following elements are likely to constitute the circuit?

- (i) Only resistor
- (ii) Resistor and inductor
- (iii) Resistor and capacitor
- (iv) Only inductor

Q40. In which of the following circuits the maximum power dissipation is observed?

- (i) Pure capacitive circuit
- (ii) Pure inductive circuit
- (iii) Pure resistive circuit
- (iv) None of these

Q41. A charged particle is moving on circular path with velocity v in a uniform magnetic field B, if the velocity of the charged particle is doubled and strength of magnetic field is halved, then radius becomes

- (i) 8 times
- (ii) 4 times
- (iii) 2 times
- (iv) 16 times

Q42.What is the net force on the rectangular coil?



(i)  $25 \times 10^{-7}$  N towards wire. (ii)  $25 \times 10^{-7}$  N away from wire.

(iii)  $35 \times 10^{-7}$  N towards wire.

(iv)  $35 \times 10^{-7}$  N away from wire.

Q43.Consider a region inside which, there are various types of charges but the total charge is zero. At points outside the region

(i) the electric field is necessarily zero.

(ii) the electric field is due to the dipole moment of the charge distribution only.

(iii) the dominant electric field is inversely pro-portional to r3, for large r (distance from ori-gin).

(iv) the work done to move a charged particle along a closed path, away from the region will not be zero.

Q44.. The surface considered for Gauss's law is called

- (i) Closed surface
- (ii) Spherical surface
- (iii) Gaussian surface
- (iv) Plane surface

Q45.Which of the following is called heat radiation?

- (i) X-rays
- (ii) γ-rays
- (iii) Infrared radiation
- (iv) Microwave

Q46. Given below are two statements labelled as Assertion (i) and Reason (R)

Assertion (i): To increase the range of an ammeter, we must connect a

suitable high resistance in series toit.

**Reason (R):** The ammeter with increased range should have high resistance. Select the most appropriate answer from the options given below:

- (i) Both A and R are true and R is the correct explanation of A
- (ii) Both A and R are true but R is not the correct explanation of A.
- (iii)A is true but R is false.
- (iv) A is false and R is also false.

Q47. Given below are two statements labelled as Assertion (i) and Reason (R)

Assertion (i): An electron has a high potential energy when it is at a location associated with a more negative value of potential, and a low potential energy when at a location associated with a more positive potential.

Reason (R):Electrons move from a region of higher potential to region of lower potential.

Select the most appropriate answer from the options given below:

- (i) Both A and R are true and R is the correct explanation of A
- (ii) Both A and R are true but R is not the correct explanation of A.
- (iii) A is true but R is false.
- (iv) A is false and R is also false.

Q48. Given below are two statements labelled as Assertion (i) and Reason (R)

Assertion(i): A magnetic needle free to rotate in a vertical plane, orients itself (with its axis) vertical at the poles of the earth.

Reason (R): At the poles of the earth the horizontal component of earth's magnetic field will be zero.

Select the most appropriate answer from the options given below:

- (i) Both A and R are true and R is the correct explanation of A
- (ii) Both A and R are true but R is not the correct explanation of A.

(iii)A is true but R is false.(iv) A is false and R is also false.

Q49. Given below are two statements labelled as Assertion (i) and Reason (R)

Assertion(i): A proton and an electron, with same momenta, enter in a magnetic field in a direction at right angles to the lines of the force. The radius of the paths followed by them will be same.

Reason(R): Electron has less mass than the proton.

Select the most appropriate answer from the options given below:

- (i) Both A and R are true and R is the correct explanation of A
- (ii) Both A and R are true but R is not the correct explanation of A.
- (iii) A is true but R is false.
- (iv) A is false and R is also false.

#### SECTION C

This section consists of 6 multiple choice questions with an overall choice to attempt any 5. In case more than desirable number of questions are attempted, ONLY first 5 will be considered for evaluation.

Q50.In an LCR-series ac circuit, the voltage across each of the component L, C and R is 50 V. The voltage across the LC-combination will be

(i) 50 V

(ii) 50√2 V

(iii) 100 V

(iv) zero

Q51. A Daniel cell is balanced on 125 cm length of a potentiometer wire. Now the cell is short-circuited by a resistance 2 ohm and the balance is obtained at 100 cm. The internal resistance of the Daniel cell is

(i) 0.5 ohm

(ii) 1.5 ohm

(iii) 1.25 ohm

(iv) 4/5 ohm

# Case study:

# Read the following paragraph and answer the questions:

Resistance is a measure of the opposition to current flow in an electrical circuit. Resistance is measured in ohms. Also Resistivity, the electrical resistance of a conductor of unit cross-sectional area, and unit length. ... A characteristic property of each material, resistivity is useful in comparing various materials on the basis of their ability to conduct electric currents.



52. Resistivity is independent of:

(i) nature of material

(ii) temperature

(iii) dimensions of material

(iv) none of the above

53. As compare to short wires, long wires have \_\_\_\_\_ resistance.

(i) more

- (ii) less
- (iii) same
(iv) zero

54. As compare to thin wires, thick wires have \_\_\_\_\_ resistance.

(i) more

- (ii) less
- (iii) same
- (iv) zero
- 55. The resistance of a wire depends upon:
- (i) cross-sectional area
- (ii) length of wire
- (iii) wire's nature
- (iv) all of the above

	DELHI PUBLIC SCHOOL ,, RANCHI CHEMISTRY PRACTICE PAPER 3
1	Graphitecannotbeclassifiedas a) Networksolid b) conductingsolid c) ionicsolid d) covalentsolid
2	<ul> <li>Whichofthefollowingstatementsisnottrueaboutamorphoussolids?</li> <li>a) Theyareanisotropicinnature</li> <li>b) Onheatingtheymaybecomecrystallineoncertaintemperature</li> <li>c) Theymaybecomecrystallineonkeepingforlongtime</li> <li>d) Amorphoussolidscanbemouldedbyheating</li> </ul>
3	Schottkydefectisgenerallyappearsin a) KCl b) Cscl c) NaCl d) allofthese
4	Whichstatementdoesnotmakesense? a) Frenkeldefectisnotfoundinalkalimetalhalides b) Schottkydefectlowersthedensityofthecrystal c) Frenkeldefectlowersthedensityofthecrystal d) Schottkydefectisverycommoninalkalimetalhalides
5	DopingofAgClcrystalswithCdCl <sub>2</sub> resultsin a) FormationofF <sup>-</sup> centres b) substitutionalcationvacancy c) schottkydefect d) frenkeldefect

	<ul> <li>CASE-STUDYPASSAGEBASEDMULTIPLECHOICE.</li> <li>Scuba divers must cope with high concentrations of dissolvedgases while breathing air at high pressure underwater. Increasedpressure increases the solubility of atmospheric gases in blood. When the divers come towards surface, the pressure graduallydecreases. This releases the dissolved gases and leads to theformation of bubbles of nitrogen in the blood. This blocks capillariesand creates a medical condition known as bends, which are painfuland dangerous to life. To avoid bends, as well as the toxic effects ofhighconcentrationsofnitrogenintheblood, thetanksusedbyscubadiversarefille dwithairdilutedwithhelium, nitrogen, and oxygen.</li> <li>6)Scubadiverscarrythecylinderconsistingthemixtureofgasesdilutedinair A) 02, He, CO2</li> <li>B) 02, He, N2</li> <li>C) 02, He, Ne</li> <li>D) 02, Ar, N2</li> </ul>	
7	Thepeoplelivinglongerathighaltitudessuitablysufferfromthediseaseknownas A) Highbloodpressure B) Breathlessness c)suffocation D)Anoxia	
8	SoftdrinksarepreparedbydissolutionofCO2,byapplyingmorepressure,thiscanbe understoodby A) Daltonslaw B) Charleslaw C) Henryslaw D) Avogadrolaw	
9	.Whatistheeffectoftemperatureonsolubilityofgasesinliquids. A) Noeffect B) Increaseintemperaturedecreasessolubility C)Increaseintemperatureincreasessolubility D) Itcannotbecorrelated.	
10	If scuba divers do not carry the proper diving device along withappropriatecylindercontainingsuitablemixtureofrequiredgases,meant for breathing support, when they come to surface theyexperience A) Bloodclots B) Scratchesontheskin C) Burstcapillaries	

	D)causesbends
11	An azeotropic mixture of two liquids boils at a temperature lowerthaneitherofthemwhen A) itissaturated B) itdoesnotdeviatefromRaoultslaw C) itshowspositivedeviationfromRaoultslaw D)itshowsnegativedeviationfromRaoultslaw.
12	.ThehardcellofaneggwasdissolvedinHCI.Theeggwasthenplacedinaconcentrate dsolutionofNacI.Whatwillhappen? A) Theeggwillshrink B) Theeggwillswell C)Theeggwillbecomeharder D) Therewillbehardlyanychange
13	Asubstancewillbedeliquescent,ifitsvapourpressureis A) equaltotheatmosphericpressure B) equaltothatofwatervapourinair C)lesserthanthatofwatervapourinair D)greaterthanthatofwatervapourinair.
14	Globularproteinsarepresentin (a) blood (b) egg (c) milk (d)alloftheabove
15	Amongthenaturallyoccurringcarbohydrates,furanoseringisfoundin, (a) Glucoseunitofcanesugar (b) Glucoseunitofcellulose (c) Fructoseunitofcanesugar (d) Galactoseunitoflactose
16	Howmanycarbonatomsandoxygenatomsaretherewithinapyranoseringrespec tively? (a)3,2 (b)5,1 (c)6,0 (d)7,0

17) 1.Column1	Column2
a) H2SO4	1)Highestelectrongainenthalpy
b) CCI3NO2	2)Chalcogen

c)	CI2				3)Teargas
d)	Sulphur				4)storagebatteries
A) B) C) D)	a)4 a)3 a)4 a)2	b)3 b)4 b)1 b)1	c)1d)2 c)1 c)2 c)3	2 d)2 d)3 d)4	

18	Whichofthefollowingisomershasthehighestmeltingpoint?(a)1, 2-Dichlorobenzene (b)1,3- Dichlorobenzene(c)1,4- Dichlorobenzene (d)Allisomershavethesamemeltingpoints	
19.	Whichreagentsarerequiredfortheonestepconversionofchlorobenzene totoluene? (a)CH3CI,Na,Dryether( b)CH3CI/ AICI3(c)CH3CI/Fe dark(d)NaNO2/HCI/0- 50C	
20	TertiaryalkylhalidesarepracticallyinerttosubstitutionbySN2mechanis mbecauseof (a)Insolubility(b)Ind uctive effect(c)Instability(d) Sterichinderance	
21	InwhichofthefollowinghalidesCsp2– Xbondispresent?(a)Allylhalide (b)Aryl halide(c)Benzyl halide(d)Alkylha lide	
22.	Thecorrectincreasingorderofboilingpointsforthefollowingis:(a)RC I <rf<ri<rbr (b)RF <rci<rbr< RI(c)RI <rbr<rci< RF(d)RCI<rbr<ri<rf< td=""><td></td></rbr<ri<rf<></rbr<rci< </rci<rbr< </rf<ri<rbr 	
23	IUPACnameofCH2=CH- CH2Clis(a)AllyIchloride (b)VinyIchloride (c)1-Chloro-3- propene(d)3-Chloro-1- propene	
24	C3H8+Cl2 UVlight C3H8+Cl2 UVlight itution (b)Free radical addition(c)Electrophilic addition(d)Electrophilicsubstitution	
25.	InthereactionofphenolwithCHCl3andaqueousNaOHat343K,theelectro kingtheringis: (a) CHCl3 (b) CHCl2 (c) CCl2 (d) COCl2	phileattac

26.	26.PhenolreactswithBr2inCS2atlowtemperaturetogive (a) o-Bromophenol (b) o-andp-Bromophenols (c) p-Bromophenol (d) 2,4,6Tribromophenol				
27.	<ul> <li>27.1-Propanoland2-propanolcanbebestdistinguishedby</li> <li>(a) OxidationwithKMnO4followedbyreactionwithFehlingsolution?</li> <li>(b) OxidationwithacidicdichromatefollowedbyreactionwithFehlingsolution.</li> <li>(c) OxidationbyheatingwithcopperfollowedbyreactionwithFehlingsolution.</li> <li>(d) Oxidationwithcone.H2SO4followedbyreactionwithFehlingsolution.</li> </ul>				
28.	28.EthylenereactswithBaeyer'sreagenttogive (a) ethane (b) ethylalcohol (c) ethyleneglycol (d) Noneofthese				
29.	29.Bywhichofthefollowingmethodsalcoholcanbepreparedinexcellentyield? (a) Fromalkenes (b) Byhydroboration-oxidation (c) Fromcarbonylcompounds (d) FromGrignardreagent				
<ul> <li>30. 30.Lucasreagentis</li> <li>(a) Conc.HClandanhydrousZnCl2</li> <li>(b) Conc.HNO3andhydrousZnCl2</li> <li>(c) Conc.HClandhydrousZnCl2</li> <li>(d) Conc.HNO3andanhydrousZnCl2</li> </ul>					
Quest	ion <b>PASSAGE::</b> Ethersaretheleastreactiveofthefunctionalgroups.The cleavage of C-O bond in ethers takes place under drasticconditions with excess of hydrogen halides. The reaction of dialkylethergivestwoalkylhalides.Alkylarylethersarecleavedatthe				

	alkyl-oxygen bond due to the more stable aryl-oxygen bond. Theorder of reactivity of hydrogen halides is as follows: HI >HBr>HCI.ThecleavageofetherstakesplacewithconcentratedHlorH Brathightemperature. 31).IdentifytheproductsinthereactionofanisolewithHBr(a)C6H5OH andCH3Br (b)C6H5Br and CH3OH(c)C6H5OH and C2H5Br(d)C6H5BrandC 2H5OH
32.	tert-ButylmethyletheronheatingwithHlgivesamixtureof (a) tert-Butylalcoholandmethyliodide (b) tert-Butyliodideandmethanol (c) Isobutyleneandmethyliodide (d) Isobutyleneandmethanol.
33.	. Among the following ethers, which one will produce methyl alcoholontreatmentwithhotconcentratedHI? (a) $CH_3 - CH_3 - CH_3$ (b) $CH_3 - CH_2 - CH_2 - CH_3$ (c)CH3-CH2-CH2-CH2-O-CH3 (d) $CH_3 - CH_2 - CH_3 - CH_3$ $CH_3 - CH_2 - CH_3 - CH_3$
34.	ChloroethanereactswithwhichofthefollowingtogiveDiethylEther? (a)NaOH(b) H2SO4(c)C 2H5Ona(d)N a2S2O3

35	
	Match the following: I II (i)Amino acids (A) Protein (ii) Thymine (B) Nucleic acid (iii) UraciI (C)DNA (iv) Phosphodiester linkage (D) RNA (v)Insulin
	Which of the following are the best matched options?
	(a) i-A, v- D, iii- C, iv-B (b) i-D, ii-C, iii- A, iv-B (c) i-D, v- D, iii- A, iv-B (d) i-A, ii- C, iii- D, iv-B

36	Match the following:
	(i) D,L Configuration (A) C-1 carbon
	(ii) Anomers (B) Glyceraldehyde
	(iii) Lactose (C)Glucose
	(iv) Aldohexose (D) Milk
	(v) Furanose
	Which of the following are the best matched options?
	(a) i-B, ii-A- iii-D, iv- C
	(b) i-C, ii-D, iii- A, iv-B
	(c) i-B, ii-C, iii- D, iv-A
	(d) i-A, ii- C, iii- D, iv-B

	QUESTIONSBASEDONASSERTIONANDREASONTYPE Directions: Q No: 37 to 51 are of Assertion (A) followed by astatementofReason(R)isgiven.Choosethecorrectansweroutoft hefollowingchoices.(a) Assertion(A)andReason(R)botharecorrectstatements,andReas on(R)iscorrectexplanationforAssertion(A)(b) Assertion(A)andReason(R)botharecorrectstatementsbutReas on(R)isnotcorrectexplanationforAssertion(A)(c) Assertion(A)iscorrectstatement,butReason(R)iswrongstate ment (d) Assertion(A)iswrongstatement,butReason(R)iscorrectstate mentQ37. Assertion (A): Glucose gets oxidized to gluconic acid onreactionwithmildoxidizingagentlikebrominewater. Reason (R): Glucose contains a keto group
38	. Assertion (A): Glucose is correctly named as D- (+)-glucose.Reason (R): 'D' before the name of glucose represents itsdextrorotatorynature
39	Assertion (A): The two cyclic hemiacetal forms of glucose,α- formandβformarecalledanomers Reason (R): Anomers differ only in the configuration of the hydroxylgroupatC-1
40	. Assertion (A):Fructose is a keto hexose. Reason (R):It has aldehyde functional group

41.	.Assertion(A):PurinebasespresentinDNAareAdenineandGuanine Reason(R):ThebaseThymineispresentinRNAwhilebaseuracilispres entinDNA

42	. Assertion (A): The two strands of DNA are complementary toeachother Reason (R): Adenine specifically forms hydrogen bonds withGuaninewhereasCytosineformshydrogenbondswithThymine

43	. Assertion(A): $\alpha$ -aminoacidsexistasdipolarionsorzwitterions Reason (R): $\alpha$ - amino acids are the building blocks of protein
44	.Assertion(A):DNAundergoes replication Reason (R): DNA contains cytosine and thymine as pyrimidinebases
45	. Assertion (A): Haemoglobinis a globular proteinReason (R): Globular proteins are insoluble in water
46	Assertion (A): In DNA, Nucleotides are phosphate esters ofnucleosides Reason(R):InDNA,thevariousnucleotidesarelinkedeitherthroughpu rineorpyrimidinebases.
47	. Assertion (A): Glycine is not an essential amino acid.Reason(R):Glycineneednotbetakenthroughdietasitiss ynthesizedbyourbody
48.	.Assertion(A):Allnaturallyoccurringα- aminoacidsexceptglycineareopticallyactive. Reason(R):MostnaturallyoccurringaminoacidshaveL- configuration.
49	. Assertion (A): Glycylalanine is a dipeptide, consists of peptidelinkage Reason(R):Thebondbetweenglycineandalanineis-CO-NH-bond
50	. Assertion (A): Disruption of the native structure of a protein iscalleddenaturation Reason(R):Thechangeincolourandappearanceofeggduringcookin gisduetodenaturation

51	Assertion(A):DNAhasdoublehelicalstructure Reason(R):ThetwostrandsinDNAmoleculeareexactlysimilarinsamedir ection
52	Duringacetylationofglucoseitneeds,xmolesofaceticanhydride.Thevalu eofxwouldbe, (a) 3 (b) 5 (c) 4 (d) 1
53	OnoxidationwithamildoxidisingagentlikeBr2/H2O,theglucoseisoxidize dto, (a) saccharicacid (b) glutamicacid (c) gluconicacid (d) valericacid
54	.Invertsugaris, (a) atypeofcanesugar (b) opticallyinactiveformofsugar (c) mixtureofglucoseandgalactose (d) mixtureofglucoseandfructoseinequimolarquantities
55	Whichreagentisusedtoconvertglucoseintosaccharicacid? (a) Br2/H2O (b) Nitricacid (c) Alkalinesolutionofiodine (d) Ammoniumhydroxide

# **SAMPLE PAPER PRACTICE SET-3**



# ELHI PUBLIC SCHOOL, SAILTOWNSHIP, RANCHI.

BLUE PRINT: 1. Question paper consist of 60 questions 2.Ch-2- 9 questions [Direct MCQ] 3.Ch-3 -7+1(AR) + 6( Case based)= 14 questions 4.Ch-4 - 2 + 2(AR) = 4 questions 5.Ch-5 - 15+ 1(AR)=16 questions 6.Ch-6 - 17 questions

### CHAPTER-2

- Q.1 Justify the following statement regarding section of an anther[Given]
  - (a) A Monothecous anther with two pollen sacs[Digonal]
  - (b) A Dithecous anther with 4 pollen sacs[ Tetragonal]
  - (c) A Tetra thecous Anther with 4 pollen sacs
  - (d) A Trithecous anther with tetragonal pollen sacs
- Q.2 Which is correct for attachment side of The proximal end of the filament.
  - (a) attached to the ovary or the sepals of the flower.
  - (b) attached to the thalamus or the petal of the flower.
  - (c) attached to the gynoecium or the ovular surface of the flower.
  - (d) None of these
- Q.3 Under the following structure depict:
  - (a) Microsporogenesis
  - (b) development of pollen sacs
  - (c) Pollen dehiscent/ pollen shedding
  - (d) Differentiation of pollen grain







- Q.4 Development of gamete and gametophyte are important step for sexual reproduction in flowering plant. Most distinguishing character for them is/are:
  - (a) Development of gamete takes place at sexual maturity but gametophyte development at embryonic stage.
  - (b) Gametes are haploid(n) but gametophytes are diploid(2n)
  - (c) Gametes are developed through meiosis but gametophytes through Intranuclear mitosis.
  - (d) Gametes and gametophytes are same both are developed through meiosis.
- Q.5 Find out the gametophytes structure in a flowering plant:
  - (a) Microspores, Pollen grain, Megaspore & ovule
  - (b) Pollen grain and Embryo sac
  - (c)Microspore tetrad & Megaspore tetrad.
  - (d) None of these
- Q.6 Pollen grains are well preserved as fossils due to.
  - (a) Dehydrated form (b) Matured male gametophyte
  - (c) Sporopollenin (c) Pectocellulose
- Q.7 Which cells are free floated
  - (a) Vegetative cell in the liquid matrix or in cytoplasm of generative cell.
  - (b) Generative cell in pollen sac
  - (c) Generative cells in the cytoplasm of vegetative cell
  - (d) they are plant cells that is why they never can floated.
- Q.8 Temperature maintain in Cryopreservation is:
  - (a) below zero degree (b) Just freezing temperature
  - (c)  $-196^{\circ}C$  (d)  $-105^{\circ}C$ .
- Q.9 In multicarpilary pistil can recognized as:
  - (a) Syncarpous (b) Apocarpous
  - (c) Apogynous (d) both a & b



Q.10 Which of the following is an analogous event of pollination found in Human

(a) Spermatogenesis	(b)Embryogenesis
(c)Fertilization	(d)Insemination

Q.11 Semineferous tubles lined by cuboidal and pyramidal cells, which of the following are responsible for differentiation into spermatocyte?

(a)Male germ cell	(b) Spermatogonia

- (c) Sertoli cell (d) both a & b
- Q.12 The female reproductive system consists of a pair of ovaries along with a pair of oviducts, uterus, cervix, vagina and the external genitalia. Beside these which one is the integrated structural and functional component help in reproduction.
  - (a) Bulbouretral gland (b) Mammary glands
  - (c) Placenta (d) Pituitary gland
- Q.13 In human reproductive system which organ look like an inverted pear.

(a) Testis	(b) Male external genitalia
(c) Ovary	(d) Uterus

- Q.14 Select the correct statement
  - I. The spermatids are transformed into spermatozoa (sperms) by the process called spermiogenesis.
  - II. Spermiogenesis followed by spermatocytogenesis
  - III. After spermiogenesis, immature form finally released from the seminiferous tubules by the process called spermiation.
  - IV. Morphogenesis of spermatids into spermatozoa called as spermiogenesis
  - V. Spermatogenesis is the process of differentiation of spermatogonia into spermatozoa.
  - (a) I,II & III (b)I,III,V
  - (c) I,IV,V (d)III,IV,V

Q.15 Sources of Relaxin

- (a) Corpus albican (b) Ovary
- (c)Regressing corpus luteum (d) All of these



Q.16 Which of the following hormones are only available in blood or urine of Pregnant mother.

- (a) Progesteron only (b)Estrogen, hCG
- (c) hPL, hCG & Relaxin (d)Cortisol, thyroxin & Prolactin
- Case based : In testis, the immature male germ cells (spermatogonia) produce sperms by spermatogenesis that begins at puberty. The spermatogonia (sing. spermatogonium) present on the inside wall of seminiferous tubules multiply by mitotic division and increase in numbers. Each spermatogonium is diploid and contains 46 chromosomes. Some of the spermatogonia called primary spermatocytes periodically undergo meiosis.



Answer the following Q. 17 to Q.19 on the basis of given case study.

- Q.17 During spermatogenesis and oogenesis how many times differentiation takes place
  - (a) One times in spermatogenesis and two times in oogenesis
  - (b) 2 times in spermatogenesis and one time in oogenesis
  - (c) In both cases 2 times each
  - (d) Inspermatogenesis single time for the formation of spermatogonia and one time in oogenesis



Q.18 Spermatogenesis is the sum of

- (a) Mitosis and meiosis (b)Two times meiosis
  - (c) Meiosis-I and Meiosis-II (d)Both b & c
- Q.19 Duration of I<sup>st</sup> meiosis in Oogenesis is
  - (a) Period between Oogonium to Primary oocyte
  - (b) Period between Primary follicle to secondary follicle
  - (c) Period between primary oocyte to secondary oocyte
  - (d) Period between Primary follicle to tertiary follicle

Case Study: The reproductive cycle in the female primates (e.g. monkeys, apes and human beings) is called menstrual cycle. The first menstruation begins at puberty and is called menarche. In human females, menstruation is repeated at an average interval of about 28/29 days, and the cycle of events starting from one menstruation till the next one is called the menstrual cycle.



Answer the following Q.20 to Q.22 on the basis of given case study.

Q.20 Duration of follicular phase where primary follicles are transform into graffian follicle



(a) 1 to 13 days

(b)9 to 13 days

(c)3 to 9 days (d) 1 to 5 days

Q.21 Degeneration of corpus luteum lead into

- (a) Menstruation (b) Degeneration of endometrium
- (c) Marking a new cycle (d) All of these

# Q.22 Regressing corpus luteum is/are

- (a) I & J (b)I
- (c)J only (d)none of these.
- Q.23 Assertion: Human embryo of 6-8 cell stage characterized as blastocyst, responsible for implantation

Reason: Embryo proper[Inner cell mass] differentiated in to two layers syncyto trophoblast and cyto trophoblast, Syncyto trophoblast help in interdigitation with endometrium lining.

- (a)Both assertion and reason are true, and reason is the correct explanation of assertion.
- (b)Both assertion and reason are true, but reason is not the correct explanation of assertion.
- (c)Assertion is true but reason is false.
- (d) Both assertion and reason are false.

## CHPTER-4

- $Q.24 \quad `Attain \ total \ reproductive \ health \ as \ a \ social \ goal' \ is \ the \ initiative \ of:$ 
  - (a) WHO (b) INDIA
  - (c) By Reproductively ill Heath countries (d) CHINA

Q.25 Our population which was approximately 350 million at the time of our independence reached close to the billion mark by 2000 and crossed 1 billion in May 2000. After great kind of epidemic as COVID -19 also not effective to decrease our population , now every sixth person in the world is an Indian. Justify due to

- (a) Due to active action by WHO and India is a developed country
- (b) A rapid decline in death rate, maternal mortality rate (MMR) and infant mortality rate (IMR)
- (c) Increase in number of people in reproducible age group.
- (d) both b & c

Q.26 ASSERTION: one of the best methods for couples looking for parenthood is ART.



- REASON: Non curable disorder of infertile couples could be assisted to have children through certain special techniques commonly known as assisted reproductive technologies (ART).
- (a)Both assertion and reason are true, and reason is the correct explanation of assertion.
- (b)Both assertion and reason are true, but reason is not the correct explanation of assertion.
- (c)Assertion is true but reason is false.
- (d) Both assertion and reason are false.
- Q.27 ASSERTION: One of the permanent method of Sterilization is Surgical removal of Testis.
  - REASON: In vasectomy, a small part of the vas deferens is removed or tied up through a small incision on the scrotum
  - (a)Both assertion and reason are true, and reason is the correct explanation of assertion.
  - (b)Both assertion and reason are true, but reason is not the correct explanation of assertion.
  - (c)Assertion is false but reason is correct.
  - (d) Both assertion and reason are false.

#### CHAPTER-5

Q.28 Find out correct relation from following Fig.



(a)Paired contrasting Character, one is Homozygous & other is heterozygous

(b)Paired non contrasting character, both are homozygous.

(c)Paired contrasting Character, one is Homozygous dominant & other is Heterozygous Dominant

(d)Paired contrasting Characters, one Homozygous dominant and other Homozygous recessive.

Q.29 Under the following Mendelian Experimental tools Find out wrong selection.



S.No.	Characters	<b>Contrasting Traits</b>
1.	Stem height	Tall / Short
2.	Flower colour	Violet / White
З.	Flower position	Terminal/Axial
4.	Pod shape	Inflated/constricted
5.	Pod colour	Yellow /Green
6.	Seed shape	Round / Constricted
7.	Seed colour	Green /Yellow

- (a)3,5,6 & 7 (b) 2, 5,6 & 7
- (c)3,5 & 7 (d) 5 & 6 only

From the following fig. answer Q.30to 33

- Q.30 Which one emasculate by Mendel
- (a)Pollen (b) Anther
- (c)Stigma



- Q.31 From above Fig. Find out correct option
  - (a) Experiment for Artificial Hybridization

(d) Ovule

- (b) Experiment of Inheritance of one gene
- (c) Experiment of Selective cross
- (d) All of these
- Q.32 For above experiment Mendel selected contrasting trait of:
  - (a) Colour of Flower Violet and white for Monohybridization
  - (b) Stem size as Tall & Dwarf for Mono hybridization
  - (c) Flower colour and stem size both[Violet & white as well as Tall & Dwarf] for monohybridization



(d) Non of these

- Q.33 After the above experiment which result he had obtained?
  - (a) Proportion of Pure Tall : Immpure Tall: Pure Dwarf was 1/4 : 2/4: 1/4
  - (b) Proportion of Tall : Pure Dwarf was 3/4: 1/4
  - (c) Proportion of Pure Tall : Impure Tall: Pure Dwarf was 1 : 2:1
  - (d) Both a & c
- Q.34 Based on these observations, Mendel proposed that something was being stably passed down, unchanged, from parent to offspring through the gametes, over successive generations. He called these things as 'factors'. Form this idea of Mendel later scientist concluded that:
  - (a) Stable trait inheritance (b) Contrasting trait Inheritance
  - (c) Mendelian 'Factor' is non blending
  - (d) Unit of Inheritance are Gene
- Q.35 Genes which hold the information as coded form for a pair of contrasting traits are known as:
  - (a) Genetic Code (b) Alleles
  - (c) DNA sequence (d) RNA sequences
- Q.36 According to Mendelian principle which is correct :
  - (a) Character that is expressed in Heterozygous but not homozygous condition called as Dominant
  - (b) Character that is expressed in Heterozygous but not homozygous condition called as Recessive
  - (c) Character that is expressed in both Heterozygous and homozygous condition called as Dominant
  - (d) Character that is expressed in both Heterozygous and homozygous condition called as Recessive
- Q.37 A diploid organism is heterozygous for four loci, how many types of gametes can be produced?

[Hint: Genes are not linked or they are non linked genes]

- (a) 4 types (b) 16 types
- (c) 8 types (d) 24 types



Q. 38 Capital and small alphabet always use as same alphabet e.g For size T and t but never T and d why?

(a) alleles of the same gene	(b) Gene of same Allele
------------------------------	-------------------------

- (c)Traits of same locus (d) all of these
- Q.39 In the process of meiosis, the alleles of the parental pair separate or segregate from each other and only one allele is transmitted to a gamete. This segregation of alleles is a
  - (a) Conservative process (b) Dispersive process
  - (c) Random process (d) Selective method

a: -04 Phenotypic ratio : tall Genotypic ratio (b) Graphical representation to calculate Probability

Q.40 Following Fig. of Punnett Square, it was developed by a British geneticist, Reginald C. Punnett. It is

(a) Crossing board only

(c)Binomial expression for Monohybridization to calculate Probability

#### (d) All of these

Q.41The F1 plant of the genotype Tt when self-pollinated, produces gametes of the genotype T and t then find out the chances of fertilization takes place through t :

(c) ½ % (d) <sup>1</sup>/<sub>4</sub>%



Q.42 From Q.41 result of fertilization shows formation of Zygote and genotypes TT,Tt & tt. Find out the cause of such resultant:

- (a) Selective fertilization (b) Random fertilization
- (c) Induced fertilization (d) natural fertilization
- Q.43 Assertion: It is experimentally prove that physical association of genes on a chromosome called as linkage and closed genes are linked gene and non closed genes are non linked gene.
  - Reason: Distance between two gene is directly proportion with % of Linkage where as it is inversely proportional with % of Recombination.
  - (a)Both assertion and reason are true, and reason is the correct explanation of assertion.
  - (b)Both assertion and reason are true, but reason is not the correct explanation of assertion.
  - (c)Assertion is true but reason is false.
  - (d)Both assertion and reason are false.

#### CHAPTER-6

- Q.44 The VNTR belongs to a class of satellite DNA referred to
  - (a) SNTRs (b) Microsatellite
  - (c) Minisatellite (d) DNA Probe

Q.45 During DNA fingerprinting how repetitive DNA are separated from bulk genomic DNA as different peaks:

- (a) Through gel electrophoresis (b) Southern Blotting
- (c) Density gradient centrifugation (d) Auto radiography

Q.46 The DNA sequence show high degree of polymorphism and form the basis of DNA fingerprinting.

- (a) VNTs (b) SNPs
- (c) Palindromic (d) Satellite DNA

Q.47 Which one is correct traditional definition of DNA polymorphism?

- (a) Allelic sequence variation is known as DNA Polymorphism
- (b) More than one variant (allele) at a locus occurs in human population with a frequency greater than 0.01



- (c) An inheritable mutation is observed in a population at high frequency called as DNA polymorphism
- (d) All of these
- Q.48 In the term Expressed Sequence Tags (ESTs), here expressing is related to:
  - (a) Express of RNA into Protein (b) RNA to DNA
  - (c)Express DNA as RNA (d) Express RNA to RNA
- Q.49 Under HGP sequence annotation is related to:
  - (a) Sequencing of complete length of DNA coding and non coding sequences
  - (b) Sequencing of coding sequences only those can transcribe and translate
  - (c) Sequencing of repeated non coding sequences those are non functional
  - (d) Sequencing of such sequences those can transcribe mRNA and translate functional protein.

Q.50 Which of the following statement satisfy the statement" Regulation of *lac* operon by repressor is referred to as negative regulation".

- (a) The binding of a specific protein (repressor) inhibits transcription from occurring.
- (b) DNA bound repressors often act to prevent RNA polymerase from binding to the promoter, or by blocking the movement of RNA polymerase
- (c)Inactivation of repressor lead into expression of three specific enzymes
- (d) Both a & b

Q.51 Why glucose or galactose cannot act as inducers for lac operon.

- (a) Lactose act as a inducer because it activate the Lacl repressor by binding with it.
- (b) Galactose and glucose structures are not efficient for binding with the repressor
- (c) Lactose are only metabolites found in Prokaryotes.
- (d) Glucose and galactose oxidation can possible without involvement of enzyme.
- Q.52 Under the following level of the gene expression which is/are involve in Prokaryotes:
- (i) transcriptional level
- (ii) processing level
- (iii) transport of mRNA from nucleus to the cytoplasm
- (iv) translational level.



- (a) All these levels are essential for the regulation of gene expression.
- (b) In prokaryotes no need of processing i.e required (i),(iii) and (iv)
- (c) Only (i) and (iv)
- (d) None of these
- Q.53 A translational unit in mRNA is/ are:
- (a) sequence of DNA that is flanked by the Non coding sequences, Promotor & terminator
- (b) sequence of RNA that is flanked by the start codon (AUG) and the stop codon and codes for a polypeptide
- (c) sequence of RNA that is flanked by the Structural gene only
- (d) Sequence of DNA that posses Promotor, operator and structural gene

Q.54 Which is correct about untranslated regions (UTR)

- (a) The UTRs are present at both 5'-end and at 3'-end ,before AUG and after UAA/UAG/UGA which are non functional but essential.
- (b) The UTRs are present at both 5'-end called Leader and at 3'-end called tailor
- (c) The UTRs are present at both 5'-end (before start codon) and at 3'-end (after stop codon).
- (d) All of these
- Q.55 During translation the ribosome moves from codon to codon along the mRNA and Amino acids are added one by one, result translated into Polypeptide sequences. Find out Dictator/ Director, Rep.[Representative] and who gave the vote of thanks in this stage performance of a functional gene.

(a) Director- RNA polymerase, Rep- 20 types of Amino acids, Vote of thanks- Terminator or release factor.

(b) Director/Dictator- tRNA, Rep.- 20 types of Amino acids, Vote of thanks- Terminator or release factor.

- (c) Director/Dictator- DNA, Rep.- mRNA, Vote of thanks- Terminator or release factor.
- (d) All of these
- Q.56 Which one of the following was the dual role(on one hand read the code and on other hand would bind to specific amino acids ) during poly peptide formation or protein synthesis[ before genetic code discovery]



(a) tRNA

(b)sRNA

(c)snRNA

(d) All of these

From the following Fig. answer the Questions Q.57 to 59



Q.57 From the above fig. 'X' Denoted:

- (a) Methylated G-cap (b) Translated sequences
- (c) Initiation codon (d) UTR

Q.58 Which is the anticodon for *tRNAf*<sup>Met</sup> and which arm of tRNA is exactly associated with Met?

- (a) TAC is the anticodon and  $3^{'}$  end of tRNA associate with amino acid Metheonin
- (b) UAC is the anticodon and  $5^{\prime}$  end associate with Met[ Metheonin]
- (c) UAC is the anticodn and  $3^{'}$  end of tRNA associate with Met.
- (d) CAU is the anticodon and  $3^{\prime}$  end is the associative are of tRNA for Met.

#### Q.59 'Y' denoted as

- (a) Leucine (b) Lysin
- (c)Phenylalanine (d) Leucin
- Q.60In Template independent system which of the following help full for polymerization Ribonucleatides?
  - (a) DNA dependent RNA polymerase
  - (b) Polynuceotide phosphorylase
  - (c)Severo Ochoa enzyme



# Sample Question Paper Class: XII Session: 2021-22 Computer Science (Code 083) (Theory: Term-1)

Maximum Marks: 35

**Time Allowed: 90 Minutes** 

**General Instructions:** 

- The question paper is divided into 3 Sections A, B and C.
- Section A, consist of 25 Questions (1-25). Attempt any 20 questions.
- Section B, consist of 24 Questions (26-49). Attempt any 20 questions.
- Section C, consist of 6 case study based Questions (50-55). Attempt any 5 questions.
- All questions carry equal marks.

Q.N.	Section-A
	This section consists of 25 Questions (1 to 25). Attempt any 20 questions from this
	section. Choose the best possible option.
1	Find the invalid identifier from the following
	a. none
	b. address
	c. Name
	d. pass
2	Consider a declaration $L = (1, Python', 3.14')$ .
	Which of the following represents the data type of L?
	a. list
	b. tuple
	c. dictionary
	d. string
3	Given a Tuple tup1= (10, 20, 30, 40, 50, 60, 70, 80, 90).
	What will be the output of print (tup1 [3:7:2])?
	a. (40,50,60,70,80)
	b. (40,50,60,70)
	c. [40,60]
	d. (40,60)
4	Which of the following option is not correct?
	a. if we try to read a text file that does not exist, an error occurs.
	b. if we try to read a text file that does not exist, the file gets created.
	c. if we try to write on a text file that does not exist, no error occurs.
	d. if we try to write on a text file that does not exist, the file gets
	Created.
5	Which of the following options can be used to read the first line of a text file Myfile.txt?
	a. myfile = open('Myfile.txt');
	b. myfile = open('Myfile.txt','r'); myfile.read(n)
	c. myfile = open('Myfile.txt'); myfile.readline()
	d. myfile = open('Myfile.txt');

6	Assume that the position of the file pointer is at the beginning of 3rd line in a text file. Which
	of the following option can be used to read all the remaining lines?
	a. myfile.read()
	b. myfile.read(n)
	c. myfile.readline()
	d. myfile.readlines()
7	A text file student txt is stored in the storage device. Identify the correct option out of the
	following options to open the file in read mode.
	i. myfile = open('student.txt','rb')
	ii. myfile = open('student.txt','w')
	iii. myfile = open('student.txt','r')
	iv. myfile = open('student.txt')
	,
	a. only i
	b. both i and iv
	c. both iii and iv
	d. both i and iii
8	The return type of the input() function is
	a. string
	b. integer
	c. list
	d. tuple
9	Which of the following operator cannot be used with string data type?
	a. +
	b. in
	c. *
	d. /
10	Consider a tuple tup1 = (10, 15, 25, and 30). Identify the statement that will result in an
	error.
	a. print(tup1[2])
	b. tup1[2] = 20
	c. print(min(tup1))
	d. print(len(tup1))
11	Which of the following statement is incorrect in the context of binary files?
	a. Information is stored in the same format in which the information is held in
	memory.
	b. No character translation takes place
	c. Every line ends with a new line character
	d. pickle module is used for reading and writing
12	What is the significance of the tell() method?
	a. tells the path of file
	b. tells the current position of the file pointer within the file
	c. tells the end position within the file
	d. checks the existence of a file at the desired location

13	Which of the following statement is true?
	a. pickling creates an object from a sequence of bytes
	b. pickling is used for object serialization
	c. pickling is used for object deserialization
	d, pickling is used to manage all types of files in Python
14	Syntax of seek function in Python is myfile.seek(offset, reference_point) where myfile is
	the file object. What is the default value of reference_point?
	a. 0
	b. 1
	c. 2
	d. 3
15	Which of the following components are part of a function header in Python?
	a. Function Name
	b. Return Statement
	c. Parameter List
	d. Both a and c
16	Which of the following function header is correct?
	a. def cal_si(p=100, r, t=2)
	b. def cal_si(p=100, r=8, t)
	c. def cal_si(p, r=8, t)
	d. def cal_si(p, r=8, t=2)
17	Which of the following is the correct way to call a function?
	a. my_func()
	b. def my_func()
	c. return my_func
	d. call my_func()
18	Which of the following character acts as default delimiter in a csv file?
	a. (colon) :
	b. (hyphen) -
	c. (comma) ,
	d. (vertical line)
19	Syntax for opening Student.csv file in write mode is
	myfile = open("Student.csv","w",newline=").
	What is the importance of neutline, "2
	A nowline gets added to the file
	a. A newline gets added to the first line
	b. Empty string gets appended to the first line.
	d EQL translation is suppressed
20	What is the correct expansion of CSV/ files?
20	a Comma Sonarable Values
	a. Comma Separated Values
	o. Comma Split Values
	d. Commo Separation Values
	a. Comma Separation values

21	Which of the following is not a function / method of csv module in Python?
	a. read()
	b. reader()
	c. writer()
	d. writerow()
22	Which one of the following is the default extension of a Python file?
	aexe
	bp++
	cpy
	dp
23	Which of the following symbol is used in Python for single line comment?
	a. /
	b. /*
	c. //
	d. #
24	Which of the following statement opens a binary file record bin in write mode and writes
	data from a list lst1 = [1.2.3.4] on the binary file?
	a. with open('record.bin', 'wb') as myfile:
	pickle.dump(lst1.mvfile)
	b. with open('record.bin','wb') as myfile:
	pickle.dump(myfile.lst1)
	c. with open('record.bin','wb+') as myfile:
	pickle.dump(myfile,lst1)
	d. with open('record.bin','ab') as myfile:
	pickle.dump(myfile,lst1)
25	Which of these about a dictionary is false?
	a) The values of a dictionary can be accessed using keys
	b) The keys of a dictionary can be accessed using values
	c) Dictionaries aren't ordered
	d) Dictionaries are mutable
	Section-B
	This section consists of 24 Questions (26 to 49). Attempt any 20 questions.
26	What is the output of following code:
	T = (100)
	print(T*2)
	a. Syntax error
	b. (200,)
	c. 200
	d. (100,100)

27	Suppose content of 'Myfile.txt' is:
	Twinkle twinkle little star
	How I wonder what you are
	Up above the world so high
	Like a diamond in the sky
	Whet will be the extent of the following and 0
	what will be the output of the following code?
	<pre>myrrre = Open( Myrrre.txt ) data = myfile readlines()</pre>
	print(len(data))
	mvfile.close()
	a. 3
	b. 4
	c. 5
	d. 6
28	Identify the output of the following Python statements.
	x = [[10.0, 11.0, 12.0], [13.0, 14.0, 15.0]]
	y = x[1][2]
	print (y)
	a. 12.0
	D. 13.0
	d 15.0
29	Identify the output of the following Python statements.
	X = Z
	while $X < 9$ .
	x = x + 1
	a. 12345678
	h 100150700
	0. 123456789
	c. 2345678
	d. 23456789
30	Identify the output of the following Python statements.
	b = 1
	for a in range(1, 10, 2):
	p + a + 2
	a 31
	b 33
	c. 36
	d. 39



	a. jump
	b. break
	c. continue
	d. return
34	What will be the output of the following Python code?
	<pre>def add (num1, num2):</pre>
	sum = num1 + num2
	sum = add(20, 30)
	print(sum)
	a. 50
	b. 0
	c. Null
	d. None
35	Evaluate the following expression and identify the correct answer.
	16 - (4 + 2) * 5 + 2**3 * 4
	a. 54
	b. 46
	c. 18
	d. 32
36	What will be the output of the following code?
	<pre>def my_func(var1=100, var2=200):</pre>
	var1+=10
	var2 = var2 - 10
	return var1+var2
	<pre>print(my_func(50),my_func())</pre>
	a. 100 200
	b. 150 300
	c. 250 75
	d. 250 300
37	What will be the output of the following code?
	value = 50
	def display(N):
	global value
	value = 25
	11 N%7==0:
	value = value + N
	else:
	value = value - N
	print(Value, end="#")
	display (20)
	princ(Value)
	a. 50#50 b. 50#5
	D. 50#5 c. 50#30
	u. 0#00#

38	What will be the output of the following code?
	import random
	List=["Delhi","Mumbai","Chennai","Kolkata"]
	for y in range(4):
	x = random.randint(1,3)
	<pre>print(List[x],end="#")</pre>
	a. Delhi#Mumbai#Chennai#Kolkata#
	b. Mumbai#Chennai#Kolkata#Mumbai#
	c. Mumbai# Mumbai #Mumbai # Delhi#
	d. Mumbai# Mumbai #Chennai # Mumbai
39	What is the output of the following code snippet?
	def ChangeVal(M,N):
	for i in range(N):
	if M[i]%5 == 0:
	M[i]//=5
	if M[i]%3 == 0:
	M[i]//=3
	L = [25, 8, 75, 12]
	ChangeVal(L,4)
	for i in L:
	<pre>print(i,end="#")</pre>
	a) 5#8#15#4#
	b) 5#8#5#4#
	c) 5#8#15#14#
	d) 5#18#15#4#
10	Suppose content of Mufile tut is
40	Suppose content of Mylle.txt is
	Humpty Dumpty sat on a wall
	All the kingle barges and ell the kingle man
	All the king's norses and all the king's men
	Couldn't put Humpty together again
	what will be the output of the following code?
	myrile = open("Myrile.txt")
	<pre>record = myfile.read().split()</pre>
	print (len (record))
	myfile.close()
	a. 24
	b. 25
	c. 26
4.4	
41	Find the output of the following code:
	Name="Python3.1"
	R=""
	tor v in rango (lon (Namo)).
	<pre>if Name[x].isupper():</pre>
	elif Name[x].islower():
----	--
	R=R+Name[x].upper()
	<pre>elif Name[x].isdigit():</pre>
	R=R+Name[x-1]
	else:
	R=R+"#"
	print(R)
	a. pYTHOn##@
	b. pYTHOnN#@
	c. pYTHOn#@
	d. pYTHOnN@#
42	Suppose content of 'Myfile.txt' is
	Honesty is the best policy.
	What will be the output of the following code?
	<pre>myfile = open("Myfile.txt")</pre>
	x = myfile.read()
	print(len(x))
	myfile.close()
	a. 5
	b. 25
	c. 26
	d. 27
43	Suppose content of 'Myfile.txt' is
	Culture is the widening of the mind and of the spirit.
	What will be the output of the following code?
	<pre>myfile = open("Myfile.txt")</pre>
	x = myfile.read()
	y = x.count('the')
	print(y)
	myfile.close()
	a. 2
	b. 3
	c. 4
	d. 5
44	What will be the output of the following code?
	x = 3
	<pre>def myfunc():</pre>
	global x
	x+=2
	<pre>print(x, end=' ')</pre>
	<pre>print(x, end=' ')</pre>
	myfunc()
	<pre>print(x, end=' ')</pre>

	a. 3 3 3
	b. 3 4 5
	c. 3 3 5
	d. 3 5 5
45	Suppose content of 'Myfile.txt' is
	Ek Bharat Shreshtha Bharat
	What will be the output of the following code?
	<pre>myfile = open("Myfile.txt")</pre>
	vlist = list("aeiouAEIOU")
	vc=0
	<pre>x = myfile.read()</pre>
	for y in x:
	if(y in vlist):
	vc+=1
	print(vc)
	myfile.close()
	a. 6
	b. 7
	c. 8
	d. 9
46	Suppose content of 'Myfile.txt' is
	Twinkle twinkle little star
	How I wonder what you are
	Up above the world so high
	Like a diamond in the sky
	Twinkle twinkle little star
	What will be the output of the following code?
	<pre>myfile = open("Myfile.txt")</pre>
	line_count = 0
	<pre>data = myfile.readlines()</pre>
	for line in data:
	if line[0] == 'T':
	line_count += 1
	print(line_count)
	<pre>myfile.close()</pre>
	a. 2
	b. 3
	c. 4
	d. 5



	Section-C			
	Case Study based Questions			
	This section consists of 6 Questions (50 -55) Attempt any 5 questions.			
	Rohit, a student of class 12, is learning CSV File Module in Python. During examination, he has been assigned an incomplete python code (shown below) to create a CSV File 'Student.csv' (content shown below). Help him in completing the code which creates the desired CSV File.			
	C: 1,, 2,, 3,, 4, 5,,	<b>SV File</b> AKSHAY,XII,A ABHISHEK,XII,A ARVIND,XII,A RAVI,XII,A ASHISH,XII,A		
	Incomplete Code			
	import #Statement-1 fh = open(,, newline='') #Statement-2 stuwriter = opy			
	data = [] header = ['ROLL_NO', 'NAME', 'CLASS', 'SE data.append(header)	ECTION']		
	for i in range(5): roll_no = int(input("Enter Roll Number name = input("Enter Name : ")	er : "))		
	section = input("Enter Class : ")	#Statement-4		
	data.append() stuwriter (data) fh.close()	#Statement-5 #Statement-6		
50	Identify the suitable code for blank space in the line marked as Statement-1.			
	a) csv file b) CSV c) csv			
51	Identify the missing code for blank sp	bace in line marked as Statement-2.		
	a) "Student.csv","wb" b) "Student.csv","w" c) "Student.csv","r" d) "Student.cvs","r"			
52	Choose the function name (with argumented as Statemented	iment) that should be used in the blank space of line		
	marked as Statement-3. a) reader(fh) b) reader(MyFile) c) writer(fh) d) writer(MyFile)			

53	Identify the suitable code for blank space in line marked as Statement-4.			
	a) 'ROLL_NO'. 'NAME'. 'CLASS'. 'SECTION'			
	b) ROLL_NO, NAME, CLASS, SECTION			
	c) 'roll_no','name','Class','section'			
	d) roll_no,name,Class,section			
E A	Identify the quitchle code for blank and as in the line marked as Statement E			
54	identify the suitable code for blank space in the line marked as Statement-5.			
	a) data			
	b) record			
	c) rec			
	d) insert			
55	Choose the function name that should be used in the blank space of line marked as			
	Statement-6 to create the desired CSV File?			
	a) dump()			
	b) load()			
	c) writerows()			
	d) writerow()			

## **IP/MCQs**

Q.1 What is the correct syntax to return both the first row and the second row in a Pandas DataFrame df?

A. df.loc[[0,1]]	B. df.[[0,1]]
C. df.loc[[0-1]]	C. df.[[0-1]]

Q.2 If df is a dataframe then print(df) will print

A. The first ten rows B. The first five rows

C. The first five and last five rows D. The first ten and the last ten rows

Q.3 The following table shows the python code and its expected output. Choose the correct word for blank space in line 3 for printing the column:

	A. index	B. column	C. col	D. hea	ds
Python code				Output	
1 2 3 4	import pandas as pd x = [10, 20 30] ser = pd.Series(x, print(ser)	=["r1", "r2", "r3"])		r1 r2 r3	10 20 30

Q.4 What is the correct output for following Python code:

import pandas as pd data = {"Marks1": 90, "Marks2": 95, "Marks3": 97} ser = pd.Series(data) print(ser)

Α.	Marks1	90		В.	Marks1	90	
	Marks2	95			Marks2	95	
	Marks3	97			Marks3	97	
	dtype: int	t64			dtype: in	t16	
C.	Marks1	Marks2	Marks3	D.	Marks1	Marks2	Marks3
	90	95	97		90	95	97
					dtype: in	t64	

Q.5 Pandas Series can be created from:

A. Scalar valuesB. NumPy arraysC. dictionaryD. All of the above

Q.6. Which is the best analogy of digital footprint:

A. Our foot print when we walk over sand of sea beach

B. Our foot print when we walk over the cement road constructed few minutes back C. our foot print when we enter inside our home with dirty feets. D. All of the above

- Q.7. Digital footprint are not created :
  - A. when we do online shopping
  - B. when we create our e-mail address
  - C. when we watch youtube videos
  - D. When we send e-mail

Assertion and Reason based questions

### Q. 8:

Assertion (A) : *pandas* is an open source Python library which offers high performance, easy-to-use data structures and data analysis tools.

Reason (R) : Professionals and developers are using the pandas library in data science and machine learning.

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true but R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true
- E. Both A and R are false

### Q. 9:

Assertion (A) : Data visualization refers to the graphical representation of information and data using visual elements like charts, graphs and maps etc.

Reason (R) : To install matplotlib library we can use the command

### pip install matplotlib.

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true but R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true
- E. Both A and R are false

### Q. 10:

Assertion (A) : Digital footprint is the trail of data we leave behind when we visit any website (or use any online application or portal) to fill-in data or perform any transaction.

Reason (R) : While online, all of us need to be aware of how to conduct ourselves, how best to relate with others and what ethics, morals and values to maintain.

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true but R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true
- E. Both A and R are false

### Q. 11:

Assertion (A) : An Internet troll is a person who deliberately sows discord on the Internet by starting quarrels or upsetting people.

Reason (R) : We can download and use any material available on the Internet.

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true but R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true
- E. Both A and R are false

### Q. 12:

Assertion (A) : Social media are websites or applications that enable their users to participate in social networking but they cannot create and share content with others in the community.

Reason (R) : We should not waste precious time in responding to unnecessary emails or comments unless they have some relevance for us.

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true but R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true
- E. Both A and R are false

### Case Study based questions

Q.13 ABC Enterprises is selling its products through three salesmen and keeping the records of sales done quarterly of each salesman as shown below:

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Salesman 1	23000	18000	30000	35000
Salesman 2	11000	15000	20000	22000
Salesman 3	60000	40000	35000	55000

Company is storing the above information in a CSV file "Qtrly\_Sales.csv". Mr. Rohit is a programmer. Company has given him the responsibility to create the program to visualise the above data. He wrote Python code but he is facing some difficulties. Help him by giving the solutions of following situation:

### Python code:

1 import pandas as pd

2 import \_\_\_\_\_\_as plt

3 df=\_\_\_\_("Qtrly\_Sales.csv")

4 df.plot(\_\_\_\_\_='bar', color=['red','blue','brown','green'])

5 plt('Quarterly Report') 6 plt.xlabel('Salesman') 7 plt.ylabel('Sales') 8 plt()	
<ol> <li>Choose the correct Python lib A. matplotlib</li> </ol>	rary out of following options in line 2 B. matplotlib.plot
C. py.plot	D. matplotlib.pyplot
<ol> <li>Choose the correct option to r A. read_csv</li> </ol>	read the csv file in line 3 B. pd.read_csv
C. pd.get_csv	D. get_csv
<ol> <li>Choose the correct option to s</li> <li>A. type</li> </ol>	select the type of graph in line 4 B. kind
C. style	D. graph
<ol> <li>Choose the correct word to give A. label</li> </ol>	ve the heading in line 5 B. heading
C. title	D. caption
5. Choose the correct word to di A. plot()	splay the graph in line 8 B. display()
C. showgraph()	D. show()

Q.14. Abhishek uses computer and mobile for his personal use. Study the following cases and answer the questions given below.

- (1) Once he got the message in Whatsapp that CBSE is announcing the result of class XII tomorrow at 12:00 pm. He forwarded the message to his few friends. But later he came to know that no such announcement was there in CBSE official web-site.
- (2) He is visiting several web-sites.
- (3) He is getting abuse messages from an unknown number due to which he is thinking of quarreling with that person.
- (4) He registered himself in one website by giving his email id and phone number but later his friend told him about the concept of digital footprint. He is now thinking about canceling the registration so that his personal information can be deleted from that website.
- (5) He uploaded one video in his youtube channel where he used one background music downloaded from somewhere on Internet
- a. In case (1), he is violating :
  - A. net etiquettes
    - C. copy right
- B. Communication etiquettes
- D. None of the above
- b. In case (2) , he is leaving:
   A. Active digital footprint
   B. Passive digital footprint
   C. There is no chance of any digital footprint D. None of the above
- c. In case (3), the unknown person can be called as:
  - A. Cyber bullerB. Internet trollC. HackerD. Cracker
- d. In case (4) which one is correct:
  - A. His data will be deleted forever after cancelling the registration.
  - B. His data will be deleted after 30 days since it is a digital footprint.
  - C. His data will never be deleted since it became the digital footprint.
  - D. As per the terms and condition of that website, data will be deleted.
- e. In case (5), he may be violating:

A. copyright	B. Intellectual property right
C. plagiarism	D. None of the above

- Topics: Data structures in Pandas Series and data frames. Series: Creation of series from dictionary, scalar value; mathematical operations; series attributes, head and tail functions; selection, indexing and slicing.
- Consider the following python code and write the output for statement S1: import pandas as pd

K=pd.Series([2,4,6,8,10,12,14]) print(K.quantile([0.50,0.75]) #S1

- a. 0.50 8.0
- b. 0.75 11.0
- c. 0.50 8.0
  - 0.75 11.0
- d. 0.75 11.0
- 0.50 8.0
- 2. Which of the following statements about Pandas and Numpy are True?
- a. A Numpy array requires homogeneous data, while a Pandas DataFrame can have different data types.
- b. Pandas is used when data is in Tabular Format, whereas Numpy is used for numeric array based data manipulation.
  - a. Both are true.
  - b. A is true, B is false
  - c. Ais false, B is true
  - d. Both are false
- 3. Consider the given python program:

import \_\_\_\_\_as pd #S1

series1 = \_\_\_\_.Series([10,20,30]) #S2
print(series1)

Fill the blank in S1 with the correct option:

- a. Matplotlib
- b. Matplotllib.pyplot
- c. Numpy
- d. Pandas
- 4. Fill the blank in S2 with the correct option:
  - a. pd
  - b. series1
  - c. Series
  - d. Pyplot
- 5. What will be the output of the code in Q.no. 6?
  - a. [10,20,30]
  - b. 0 10 1

	1	20
	2	30
c. 10		
	20	
30		
d. 10	1	
	20	2
	30	3

- 6. Which of the following are not true?
  - A. If we do not explicitly specify an index for the data values while creating a series of N data elements, by default indices range from 0 through N.
  - B. We cannot assign user-defined labels to the index and use them to access elements of a Series

- C. We can create a series with numeric index in random order.
- a. A only
- b. A, B
- c. B, C
- d. Conly
- 7. Choose the correct match from the given two columns:

```
Column A
                                                                   Column B
Α.
                                          1. Creating series from dictionary
       import pandas as pd
        series1 = pd.Series([10,20,30])
       print (series1)
                                                     Creating series from scalar
                                          2.
Β.
                                                     values
      import pandas as pd
      import numpy
      series1 = pd.Series(numpy.array([1,2,3,4])
      print (seriesl)
C.
                                                     Creating series from array
       series1 = pd.Series({'India': 'NewDelhi',
              'UK': 'London', 'Japan': 'Tokyo'})
       print (seriesl)
```

- a. A-1, B-2 C-3
- b. A-2, B-3, C-1
- c. A-2, B-1, C-3
- d. A-1, B-3, C-2
- What will be produced by the following python code? [Assuming that all necessary libraries and modules are imported]

series1 = pd.Series(np.array([31,28,31,30]), index = ["Jan", "Feb", "Mar"])
print(series1)

- a. Error: Length of passed values is 4, index implies 3
- b. No output

c.	Jan	31
	Feb	28
	Mar	31
d.	Jan	31
	Feb	28
	Mar	31
	Apr	NaN

9. Answer the following based on the series given below: import pandas as pd list1=[1,2,3,4,5,6,7,8]

list2=['swimming','tt','skating','kho kho', 'bb', 'chess', 'football',"cricket"]
school=pd.Series(list1,index=list2)
school.name=("little")

print (school\*2) #statement 1
print (school.tail(3)) # statement 2

print (school["tt"]) # statement 3
print (school[2:4]) # statement 4

- i. Choose the correct name of the series object given above:
  - a. list1
  - b. list2
  - c. school
  - d. little

### ii. Choose the correct output for the statement:

print (school.tai	# statement I(3)) 2
a.	
swimmir	ng 1
TT shating	2
skating	3
D.	C
Cness	6
II601001	/
cricket	8
C. 4	
a. kho kho	4
	4
boss	5
football	8
rickot	/ 0
CHCKEL	0
iii. Choose the corr print (school["tt	ect output for the statement: "]).
a. 2	
b.3	
c. tt 2	
d.true	
iv. Identify the correct	output for:
·	# statement
print (school[2:4])	4.
a. skating 3	
kho kho 4	
b.tt 2	
skating 3	
kho kho 4	
c. skating 3	
kho kho 4	
bb 5 d. skat	
	ing 3

bb 5 chess 6 football 7 cricket 8 The correct output of the following statement will be: ٧. print (school\*2) # statement 1 a. swimming 3 tt4 skating 5 kho kho 6 bb 7 chess 8 football 9 cricket 10 b. swimming 2 tt 4 skating 6 kho kho 8 10 chess 12 football 14 cricket 16 bb c. swimming False ttFalse skating True kho kho True True bb chessTrue football True cricketTrue d. swimming 1 4 tt skating9

kho kho 16 bb 25 chess36 football 49

### cricket64

- **15.** Pushp, a student of class-XII, has been assigned a code to create a pandas series S1, as shown below.
  - a 100
  - b 200
  - c 300
  - d 400
  - e 500

dtype: int64

i. Choose the command that will give the following output:

b 200 c 300 dtype: int64

a. print(S1[:3])

b.print(S1[0:3]) c.print(S1[2:4]) d.print(S1[1:3])

ii. Help him to identify the correct statement that can be used to extract the value with the index 'c': a. print(S1[c])
b. print(S1(c))
c. print('S1' ['c'])
d. print(S1 ['c'])

iii. Which of the following command will give the following output: b 200 d 400 dtype: int64

a. print(S1.iloc[1:4]) b. print(S1.iloc[2:4]) c. print(S1.iloc(1:4)) d. print(S1.iloc[1:4:2])

iv. Which of the following command will display the series by adding 10 in eachvalue. a. print(S1 [+10])

b. print(S1+10) c. print(S1)+10

d. print(S1)+print(10)

v. Pushp wants to delete the value against index 'd'. Help him to choose the suitable option to do so: a. S1=S1.drop(d)

b. S1=S1.drop('d') c. S1=drop('d') d. S1=S1.drop['d']

Answer the question based on the Assertion A and Reason R given.

A:A Series is a one-dimensional array containing a sequence of values of any data type (int, float, list, string, etc).

R:Pandas Series can be imagined as a column in a spreadsheet.

- a. Both A and R are true and R is the correct explanation of A.
- b. Both A and R are true but R is not the correct explanation of A.
- c. A is true but R is false.
- d. A is false but R is true.
- e. Both A and R are false.

**16.** \_\_\_\_\_\_\_ takes an integer value that corresponds to its position in the series starting from 0.

- a. Positional index
- b. Labelled index
- c. Both
- d. None of the above
- 17. Which of the following statement is wrong?
  - i. We can create Series from Dictionary in Python.
  - ii. Keys of dictionary become index of the series.
  - iii. Order of indexes created from Keys may not be in the same order as typed in dictionary.
  - iv. All are correct.
- 18. What will be the output of the following?

```
>>> seriesMnths = pd.Series([2,3,4],index=["Feb","Mar","Apr"])
>>> seriesMnths[1]
```

- a. 2
- b. Mar

>>> series@ap@it@by = pd.Series(['NewDelhi', 'WashingtonDC', 'London', 'Paris'],index=['India', 'USA', 'UK', 'France'])
>>> series@ap@ntry[[3,2]]

Column B

**19.** Choose the correct output of the following code:

- a. France Paris France Paris
- b. USA WashingtonDC France Paris
- c. France Paris UK London
- d. USA WashingtonDC UK London

20. Which of the following statement will create an empty series named "S1"?

- i. S1 = pd.Series(None)
- ii. S1 = pd.Series( )
- iii. Both of the above
- iv. None of the above

### **21.** Choose the codes with their outputs:

Column A			
Α.	1.		
S1=pd.Series(range(5))		а	1
print(S1)		b	4
		с	7
		d	10
			13
		е	
В.	2.		
S2=pd.Series(np.arange(3, 13, 3.5))		1	10
print(S2)		3 1	LO
		5 1	LO
С.	3.		
S3=pd.Series(10. index=range(1. 6. 2))		0	0
print(S3)		1	1
		2	2
		3	3
		4	4
Л	Л	•	•
S4=nd Series(range(1, 15, 3), index=[x for x in	ч.	0 3	8.0
(abcde/1)		1 6	55
print(SA)		2	10.0
		2	10.0
a. $A^{-4}$ , $D^{-5}$ , $C^{-2}$ , $D^{-1}$			
D. $A - 5, B - 4, C - 2, D - 1$			
(A - 3, B - 4, C - 1, D - 2)			
а. А-4, В-3, С-1, D-2			

22. Choose the correct code that produces the output below:

- 9 18
- 10 20
- 11 22
- 12 24
- a. a=np.arange(9, 13) s1=pd.Series(index=a, data=a\*2) print(s1)
- b. a=[9, 10, 11, 12] s1=pd.Series(index=a, data=a\*2) print(s1)
- c. Both the above
- d. None of the above

### 23. Choose the correct code that produces the output below:

- 0 9
- 1 10
- 2 11
- 3 12
- 4 9
- 5 10
- 6 11
- 7 12
- a. a=np.arange(9, 13) s1=pd.Series( data=a\*2) print(s1)
- b. a=[9, 10, 11, 12] s1=pd.Series( data=a\*2) print(s1)
- c. Both the above
- d. None of the above
- **24.** Choose the correct Series attributes for the given description:
- a. I return True if there are any NaN values, otherwise return False
- b. I return the number of dimensions of the underlying data
- c. I return the number of elements in the underlying data
- d. I return True if the Series object is empty, false otherwise

i.isnans, dim, size, isempty ii.hasnan, ndimension, shape, empty iii.hasnans, ndim, size, empty iv.None of the above

**25.** Topics: Data structures in Pandas - Series and data frames; Series: Creation of series from dictionary, scalar value; mathematical operations; series attributes, head and tail functions; selection, indexing and slicing.

- 1. (c) 0.50 8.0 0.75 11.0
- 2. (a) Both are true
- 3. (d) pandas
- 4. (a) pd
- 5. (b) 0 10
- 1 20
- 2 30
- 6. (b) A, B

7. (b) A-2, B-3, C-1 (a) Error: Length of passed values is 4, index implies 3 8. 9. (i) (c) school (ii)(b) chess 6 football 7 8 cricket (iii) (a) 2 iii.(d) print(S1.iloc[1:4:2]) iv.(b) print(S1+10) v. (b) S1=S1.drop('d') (a) Both A and R are true and R is the correct explanation of A. (a) Positional Index (d) All are correct. (d) 3 (c) France Paris UK London (c) Both of the above (b) A-3, B-4, C-2, D-1 (a) a=np.arange(9, 13) s1=pd.Series(index=a, data=a\*2) print(s1) (b) a=[9, 10, 11, 12] s1=pd.Series( data=a\*2) print(s1) . (c) hasnans, ndim, size, empty

Data Visualization

( Case study Based Question )

Mr.Sharma is trying to write a code to plot Q27. line graph shown in fig-1. Help Mr. Sharma 5 to fill in the blanks of the code and get the desired output.

2.0 1.5 1.0 1.00 1.25 1.50 1.75 2.00 2.25 2.5 x - axis	50 2.75 3.00			
γ = [2,4,1]		#	statement 3	3
plt.plot(x, y, color='g')		#s	tatement 4	
	# statemen # statemen	it 5 it 6		
# giving a title to my grap plt('My first graph	h !') ‡	#	statement	7
# function to show the plot	4	Ħ	statement	8
<ul><li>i) Which of the above statement i</li><li>a) Statement 8</li><li>b) Statement 4</li></ul>	s responsible f	or plo	tting the va	lues on canvas.

- c) Statement 1
- d) None of the above

ii) Statements 5 & 6 are used to give names to x-axis and y-axis as shown in fig.1. Which of the following can fill those two gaps

- a) plt.xlabel('x axis') plt.ylabel('y axis')
- b) plt.xtitle('x axis') plt.ytitle('y axis')
- c) plt.xlable('x axis') plt.ylable('x axis')
- d) plt.xlabel('x axis') plt.ylabel('y axis')

iii) Raman has executed code with first 7 statements. But No output displayed. which of the following statements will display the graph?

- a) plt.display()
- b) plt.show()
- c) matplotlib.pyplot.show()
- d) Both b & c

iv) The number of markers in the above line chart are

- a) zero
- b) three
- c) Infinite
- d) One

v) Which of the following methods will result in displaying 'My first graph!' in the above graph

- a) legend()
- b) label()
- c) title()
- d) Both a & c

Q 28. As per the reports of NDTV on Coronavirus outbreak Live statistics on 22/08/2021, 7-5 day average cases in different states of India is as follows:

State	7-Day Average (Average_cases)	Total number of cases till dated in lacs (Total_cases)
Andhra Pradesh	1295	20
Tamil Nadu	1767	25
Kerala	18909	38
Maharastra	4663	64
Telangana	375	6

In order to present the above statistical data, Raghav has decided to plot a bar graph. Suggest him suitable solution to complete his work. The above data has been taken as a dictionary with state name as keys and total number of cases as values.

covid\_cases= {"AP": 20,"TN":25, "Kerala":38, "MH":64,"TN":6} average\_cases={"AP": 1295,"TN":1767, "Kerala":18909, "MH":4663,"TN":375}

i) Which of the following statements will create a bar chart with states and corresponding total number of cases

- a) import matplotlib.pyplot as plt States=list(covid\_cases.keys())
   Total\_cases=list(covid\_cases.values()) plt.bar(States,Total\_cases)
   plt.show()
- b) import matplotlib.pyplot as plt States=list(covid\_cases.keys()) Total\_cases=list(covid\_cases.values()) plt.plot(States,Total\_cases) plt.show()

- c) import matplotlib.pyplot as plt States=covid\_cases.keys() Total\_cases=covid\_cases.values() plt.bar(States,Total\_cases) plt.show()
- d) Both a & b

ii) Which of the following statement will apply different colours to different bars with each bar of width 0.5

- a) plt.bar(
  - States,Total\_cases,color=["Red","Blue","Green"],width=0.5)
- b) plt.bar( States,Total\_cases,color=["Red"],width=0.5)
- c) plt.bar( States, Total\_cases, color=['r','g','b','m','c'], width=0.5)
- d) plt.bar( States, Total\_cases, width=0.5)
- iii) Which of the following is not a valid parameter for customizing the bar graph
  - a) width
  - b) edgecolor
  - c) legend
  - d) linecolor

iv) Which of the following option is used to display horizontal bars with states on y axis and 7-day average on x-axis

- a) plt.bar(Average\_cases,states)
- b) plt.barh(Average\_cases, states)
- c) plt.bar(states,Average\_cases)
- d) plt.barh(states,Average\_cases)

v) Which of the following is not a valid method associated with plotting bar graph

- a) legend()
- b) color()
- c) title()
- d) savefig()

### ASSERTION BASED QUESTIONS:

In each of the questions given below, there are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below:

(A) A is true but R is false.

- (B) Both A and R are true
- (C) A is false but R is true.
- (D) Both A and R are false.
- Q 29 ASSERTION(A) : A histogram is basically used to represent data provided in the form of 1 groups spread in non-continuous ranges

REASON(R) : matplotlib.pyplot.hist() function is used to compute and create histogram of a

variable.

Q 30 ASSERTION(A) : legend (labels = ['Text']) is used to give title to the graph REASON(R) : plt.savefig("path") will save the current graph in png or jpeg format 1

ASSERTION(A) : plt.plot(x,y,'g',label="Students participating in CCA competition") will Q 31: plot a

Q 31: plot a Line chart *REASON(R)* : 'g' in plot() function is colour of the marker Q32 *ASSERTION(A)* : linestyle, linewidth are used to customize line graph *REASON(R)* : In the following example markers, line style and colour are mentioned exclusively *emp\_count = [3, 20, 50, 200, 350, 400] year = [2014, 2015, 2016, 2017, 2018, 2019]* 

plt.plot(year, emp\_count, 'o', '-', 'q')

ASSERTION(A) : In histogram X-axis is about bin ranges where Y-axis talks about

### Q33 frequency

REASON(R): The bins (intervals) must be adjacent, and are often (but are not required to

- be) of equal size.
- Q34 ASSERTION(A) : matplotlib.pyplot.show() is a method used to plot a line graph REASON(R) : show() is method is defined in the library matplotlib.pip
- Q35 ASSERTION(A) : pyplot is a sub-library of matplotlib REASON(R) : line() is not a valid plotting function of pyplot
- Q36 ASSERTION(A) : Marker has different elements i.e., style, color, size etc REASON(R) : we can customize line of a line chart by using marker property of plot() function
- Q37 ASSERTION(A) : legend of the graph reflects the data displayed on the graph's Y-axis REASON(R) : Location of the legend can be changed by using loc attribute
- Q38 ASSERTION(A): Bar graph and histogram are same REASON(R): A bar graph represents categorical data using rectangular bars. A histogram represents data which is grouped into continuous number ranges and each range correspond to a vertical bar.

### Data Frame

### (Question based on Reasoning/logic)

- Q39. Which function is used to find values from a DataFrame D using the index number?
  - a) D.loc
  - b) D.iloc

1

- c) D.index
- d) None of these

Q 40	Which attribute of a dataframe is used to convert rowa into columns and columns			
	into rows in a			
	dataframe?			

- a) T
- b) ndim
- c) empty
- d) shape

Q 41	A DataFrame has two axes
------	--------------------------

- a) True
- b) False

### Q 42 .\_\_\_\_\_parameter is used to ignore row labels in concatenation operation. 1

1

1

- a) ignore\_index=True
- b) ignore\_index=False
- c) ignoreindex='true'
- d) index\_ignore='False'

### Q 43 Which of the following is/are characteristics of DataFrame? 1

- a) Columns are of different types
- b) Can Perform Arithmetic operations
- c) Axes are labeled (rows and columns)
- d) All of the above

### Q 44 Which of the following function is used to create DataFrame?

- a) DataFrame()
- b) NewFrame()
- c) CreateDataFrame()
- d) None of the Above

### Q 45 In given code dataframe 'D1' has \_\_\_\_\_ rows and \_\_\_\_\_ columns. 1 import pandas as pd S1 = pd.Series([1, 2, 3, 4], index = ['a', 'b','c','d']) S2 = pd.Series([11, 22, 33, 44], index = ['a', 'bb','c','dd']) D1 = pd.DataFrame([S1,S2]) a) 2, 4 b) 4, 6 c) 4, 4 d) 2, 6

(Assertion Reasoning based questions)

46 Assertion (A):

Nidhi has create dataframe Df1

	Df1		
	Student	Marks	Sports
I	ABC	24.5	Cricket
II	DEF	27.5	Badminton
III	GHI	30.0	Football

She can expand or delete any row /column in this dataframe. Reason(R):

In python DataFrame objects can be concatenated or merged

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.
- Q47 Assertion (A):

DataFrame.count() function will display the sum of the values from the data frame Reason (R):

axis=0, argument is to used to find sum column-wise

- a) Both A and R are true and R is the correct explanation of A.
- b) A is true but R is false.
- c) A is false but R is true.
- d) Both A and R are false

1

### **DELHI PUBLIC SCHOOL, RANCHI**

SESSION – 2021-22 Practice Worksheet III Class XII Economics Maximum Marks : 40 Time- 90 Minutes

### **General Instructions**

- 1. All questions are compulsory.
- 2. There are 40 questions in all.
- 3. This question paper contains MCQs, Case Based MCQs and Assertion-Reason based MCQs.
- 4. Only one of the options in every question is correct.

### Section A: MacroEconomics

- 1. Which among the following is not an example of near money?
  - (a) Bonds
  - (b) Insurance policy
  - (c) Securities
  - (d) None of these
- 2. Out of the total minimum reserves that RBI must maintain the value of gold must be:
  - (a) ₹200 crores
  - (b) ₹150 crores
  - (c) ₹115 crores
  - (d) ₹105 crores
- 3. Monetary system in India is based on:
  - (a) Metallic standard
  - (b) Gold standard
  - (c) Paper standard
  - (d) All of these
- 4. \_\_\_\_\_ is the ratio of total deposits that a commercial bank has to keep with RBI.
  - (a) Statutory Liquidity Ratio
  - (b) Cash Reserve Ratio
  - (c) Legal Reserve Ratio
  - (d) All of these

- 5. Identify the components of demand deposits
  - (a) Fixed deposits and savings account deposits
  - (b) Current deposits and recurring deposits
  - (c) Saving account deposits and current account deposits
  - (d) All of these deposits

6. Which of the following is not an example of indirect tax?

- (a) VAT
- (b) Excise duty
- (c) Wealth tax
- (d) None of these
- 7. \_\_\_\_\_\_ is the price paid in domestic currency for exchange of foreign currency.
  - (a) Foreign Exchange Rate
  - (b) Cross Exchange Rate
  - (c) Interest Rate
  - (d) Trade Rate

8. Increase in the value of foreign currency with respect to domestic currency due to the rise in demand for foreign currency is known as:

- (a) Depreciation
- (b) Devaluation
- (c) Appreciation
- (d) Revaluation

9. Which of the following is not included in the current account of BOP?

- (a) Government Transactions
- (b) Private Transactions
- (c) Foreign Direct Investment
- (d) All of these
- 10. Balance of Payments is composed of:
  - (a) Capital Account
  - (b) Current Account
  - (c) Both (a) and (b)
  - (d) None of these

# For Questions 11 to 14, two statements, Assertion ( A ) and Reason ( R ) are given. Choose one of the correct alternatives given below:

- (a) Both Assertion(A) and Reason(R) are true and R is the correct explanation of A.
- (b) Both Assertion(A) and Reason(R) are correct but R is not the correct explanation of A.
- (c) Assertion(A) is correct but Reason(R) is wrong.

(d) Assertion(A) is wrong but Reason(R) is correct.

11. **Assertion(A):** Gross Demand Deposits include inter-banking claims of one bank against the other.

Reason(R): Gross Demand Deposits are taken as a part of money supply.

12. Assertion(A): Fiscal discipline in India often remains a serious challenge.

**Reason(R):** Non- plan expenditure is a significant part of the total government expenditure.

13. **Assertion(A):** Less rupees are needed to buy one US dollar in case domestic currency appreciates.

**Reason(R):** Appreciation of domestic currency is caused due to a decrease in supply of foreign exchange.

14. Assertion(A): A deficit in Current Account does not imply a deficit in BOP.

Reason(R): Balance of Payments include both current account and capital account.

# Read the following news report carefully and answer the Questions 15-18 on the basis of the same:

The government is unlikely to meet the budget targets for 2020-21 due to covid-19 crisis but contraction in economic growth may not be as severe as has been pointed out by the outsider world, Economic Affairs Secretary Tarun Bajaj said. The government on a regular basis is monitoring 14 to 15 parameters which can give early signs of where the economy is heading. This includes e-way bills, power consumption, GST collections etc., and every parameter is showing promising results, he said. On the figure of first advance tax collection as of June 15, he said, "The revenues that were collected that month gave us a promise that this year if we continue in that manner and we are not saddled with any more surprises, may not be as bad as the outside world things or as we were thinking".

-Financial Express

July 23rd 2020

### Choose the correct option

15. Which of the following is a capital receipt?

- (a) GST collection
- (b) Receipts from disinvestment
- (c) E-way bill receipt
- (d) Customs duty receipts
- 16. Increased spending by the government will lead to an increase in:
  - (a) Fiscal deficit

- (b) Interest payments
- (c) Budgetary deficit
- (d) Both (b) and (c)

17. The situation of pandemic has forced the government of India to borrow finance from the World Bank. The increase in the interest payment of the loan will be directly reflected in:

- (a) Primary deficit
- (b) Fiscal deficit
- (c) Revenue deficit
- (d) All of these
- 18. Tax collection is \_\_\_\_\_ receipt.
  - (a) Revenue
  - (b) Capital
  - (c) Budgetary
  - (d) All of these

### **Section B: Indian Economy**

19. Which of the following is not responsible for decay of traditional handicrafts of India?

- (a) No tariff on export of Indian handicrafts
- (b) Competition from machine made goods
- (c) Change in taste and preferences of the people
- (d) None of these

20. High death rate and high birth rate are key characteristics of \_\_\_\_\_\_ economy.

- (a) A developed
- (b) A developing
- (c) An underdeveloped
- (d) None of these

21. 2012-2017 was the time span of the \_\_\_\_\_ five-year plan.

- (a) Tenth
- (b) Eleventh
- (c) Twelfth
- (d) None of these
- 22. Which of the following is not true about the small scale industries?
  - (a) It is labour intensive
  - (b) It promotes equality
  - (c) It facilitates locational flexibility

(d) None of these

23. Which one of the following is not an example of a maharatna?

- (a) ONGC
- (b) BHEL
- (c) BSNL
- (d) None of these

24. Which of the following is not a method used to determine poverty?

- (a) Head count ratio
- (b) Sen Index
- (c) Poverty Gap Index
- (d) None of these

25. People who regularly move in and out of poverty are called

- (a) Churning poor
- (b) Occasional poor
- (c) Chronically poor
- (d) Transient poor

26. Swarnjayanti Gram Swarozgar Yojna (SGSY), an initiative to remove poverty from rural areas was launched in:

- (a) 1995
- (b) 1997
- (c) 1998
- (d) 1999

27. Which of the following is not a determinant of human capital formation?

- (a) Expenditure on education
- (b) Expenditure on health care
- (c) Expenditure on information
- (d) Brain Drain
- 28. Human Capital Formation leads to:
  - (a) Innovative thinking
  - (b) Increase in productivity of physical capital
  - (c) Both (a) and (b)
  - (d) None of these
- 29. NABARD (National Bank for Agriculture and Rural Development) was initiated in the year:
  - (a) 1982
  - (b) 1984

- (c) 1986
- (d) 1994

30. Agricultural Marketing involves:

- (a) Storage
- (b) Processing
- (c) Use of chemical fertilisers
- (d) Both (a) and (b)

# For Questions 31 to 36, two statements, Assertion ( A ) and Reason ( R ) are given. Choose one of the correct alternatives given below:

- (a) Both Assertion(A) and Reason(R) are true and R is the correct explanation of A.
- (b) Both Assertion(A) and Reason(R) are correct but R is not the correct explanation of A.
- (c) Assertion(A) is correct but Reason(R) is wrong.
- (d) Assertion(A) is wrong but Reason(R) is correct.

31. Assertion(A): Bulk of population of India was engaged in Agriculture.

Reason(R): There has been a remarkable transition from agriculture to other sectors.

32. Assertion(A): Prashant Chandra Mahalanobis is called the Architect of Indian Planning

**Reason(R):** Planning in India was closely linked to the choice of economic system in India.

33. Assertion(A): Green Revolution had mixed effects in India.

**Reason(R):** The increase in production and productivity after the green revolution was not uniform across all regions.

34. Assertion(A): Poverty line is an ideal measure to categorise people as poor and non-poor.

**Reason(R):** Poverty Line does not take into account the differentiation among the poor and the social factors like illiteracy etc.

35. Assertion(A): Human Capital is a means to an end.

**Reason(R):** Human Capital refers to the wider choice of life that an educated and healthy individual enjoys irrespective of the value addition made in the economy.

36. Assertion(A): Institutional Sources of credit are the need of the hour.

**Reason(R):** People of rural areas are in the clutches of moneylenders who charge exorbitant rates of interest.

Read the following case study carefully and answer the Questions 37-40 on the basis of the same:

The economic situation was so precarious at the beginning of the 1980s, the Indian Government had to turn to the International Monetary Fund (IMF) for loans, and in response to its conditionalities, it had to initiate several deregulation measures. The neo-liberal programme that was adopted in 1991 had the primary task to reduce the fiscal deficit, which led to the economic crisis in 1991. Thus the important adjustments were aimed at reducing the fiscal deficit. The government set the target of reducing the fiscal deficit from its record high of 8.3% of GDP to a targeted 3-4% of GDP over a period of time.

-S. Venkatanarayanan, Economic Liberalisation in 1991 and its impact on Elementary Education in India, 2015.

### Choose the correct option.

37. During its crisis of the 1990s when India approached the IMF and the World Bank, it received a loan of:

- (a) US \$6 billion
- (b) US \$7 billion
- (c) US \$8 billion
- (d) US \$9 billion

38. \_\_\_\_\_ is known as the Year of Divide.

- (a) 1921
- (b) 1990
- (c) 1991
- (d) 1984

39. Which of the following is not a part of industrial sector reforms under liberalisation?

- (a) Reservation of production areas
- (b) Promotion of PSUs
- (c) Freedom to import capital goods
- (d) Abolition of Industrial Licensing Policy

40. GST was launched in India on:

- (a) 1st July, 2017
- (b) 7th July, 2017
- (c) 1st July, 2016
- (d) 7th July, 2018

#### **GENERAL INSTRUCTIONS**

- 1. The paper has been divided into four sections A, B, C and D.
- 2. Section A contains 24 questions. Attempt any 20 questions.
- **3**. Section B contains 22 Questions. Attempt any 18 questions.
- 4. Section C contains two Case based Questions with 12 questions Attempt any 10 questions.
- 5. Section D contains Questions 59 & 60 which are Map Based Questions. Both the questions have to be attempted
- 6. All questions carry equal marks.
- 7. There will be no negative marking.

#### Section A

1. Which one of the following statement(s) is/ are correct about the subsistence strategies of Harappa? U (1) Archaeologists have reconstructed dietary practices from finds of charred grains and seeds. Ans. Option (D) is correct. (1 Mark each) (2) Archaeo-botanists have studied grains found at Harappa like millets, barley, etc. (3) Animals were domesticated according to archeo-botanists.

- (A) (1) and (2) only
- (B) (2) and (3) only
- (C) (1), (2) and (3)
- (D) (2) only
- 2. Which of the following was a part of Harappan people's diet? R
- (A) Millets
- (B) Animal Products
- (C) Mango seeds
- (D) Both (A) and (B)
- 3. The bones of which of these animals have been found at Harappan sites? R
- (A) Lion
- (B) Pig
- (C) Deer
- (D) Both (B) and (C)
- 4. Which among the following is not a notable artefact found in Mohenjodaro site? R U
- (A) Dancing Girl
- (B) Dockyard
- (C) Pashupati-seal

(D) Priest-King

5. Chanhudaro was famous for ...... R

(A) Brick making

(B) Bead making

(C) Ship building

(D) Weapon making

6.Consider the following statements regarding the identification of Shiva, a figure represented on Harappan seals: R

1. It is shown in the form of Gajapati

2. It is shown seated in Yogic posture.

3.It is surrounded by animals. 4.It is shown with a female figure identifiable with Parvati.

Which of the above statements are correct reasons for identifying the figure with Shiva?

(A) 1 and 4

- (B) 2 and 3 Ans.
- (C) 2 and 4
- (D) 1 and 3

7. Which of the following is NOT considered as a possible reason for the end of Harappan?

(A)Floods

- (B) Afforestation
- .(C) Climate changes
- (D) All of the above.
- Q. 8..In which of the following, the problems of archaeological interpretation most evident?
- (A) Architecture
- (B) Religious practices
- (C) Social structure
- (D) Occupational structure Q. 9.In which of these countries, do sites of Indus civilization exists?
- (A) New Zeland
- (B) Russia
- (C) Africa

(D) Pakistan

Q. 10.'The Story of Indian Archaeology' is written by ......

- (A) Rakhal Das Banerji
- (B) S.N Roy
- (C) John Marshall
- (D) Alexander Cunningham

11. The significance of Harappan seals began to realize when ...... (A) Archaeologist Daya Ram Sahani in the early decades of the twentieth century discovers the seals at Harappa.

(B) A Harappan seal was given to Cunningham by an Englishman

(C) The first professional archaeologist John Marshall brought his experience of working in Greece and Crete to work in India.

(D) Rakhal Das Banerji found similar seals at Mohenjodaro.

. 12. The Director General of ASI who brought a military precision to the practice of archeology was ...... . (A) John Marshal

- (B) R.E.M. Wheeler
- (C) Alexender Cunningham (D) Howard Carter Ans.
- . 13.'My Archaeological Mission to India and Pakistan' was written by ...... . (A) John Marshal
- (B) R.E.M Wheeler
- (C) Alexender Cunningham (D) Howard Carter

14.Some scholars have suggested that "proto-Shiva" is possibly a shaman. Which of the following statement is the correct meaning of the word, shaman?

(A) People who claim magical and healing powers, as well as an ability to communicate with the other world

(B) A semi-nomadic group of desert-dwellers of Arabia (C) A person who serves as a professional copyist, specially who made copies of manuscripts.

(D) A person who has the authority to perform or administer various religious rites.

15. Magadha was the most powerful Mahajanapada from sixth to fourth century BCE. Historians offered different kinds of explanations for the growth of Magadha. Which of the following statement is incorrect regarding the growth of Magadha?

(A) Magadha was a region where agriculture was especially productive.

(B) Iron mines were accessible and provided resources for tools and weapons.

(C) Magadha's proximity to the sea makes it a business hub. Many foreign traders used to come here for trading purposes.

(D) Elephants, an important component of the army, were found in forests in the region.

16. Who was the first ruler to inscribe his messages to his subjects and officials on stone surfaces – natural rocks as well as polished pillars?

- (A) Kanishka
- (B) Bimbisara
- (C) Chandra Gupta Maurya (D) Ashoka

17. Which of the following problems do the archaeologists face while deciphering the inscriptions? (A) Damaged letters

- (B) Faint letters
- (C) Exact meaning of the words used in inscriptions
- (D) All of the above

18.King Ashoka sometimes mentioned as 'Piyadassi', in

the inscription. The meaning of 'Piyadassi', is ...... (A) Beloved of the gods

- (B) Pleasant to behold
- (C) Beautiful eyes
- (D) Beloved of nature

19.James Prinsep was able to decipher Asokan Brahmiin the year

- (A) 1835
- (B) 1838
- (C) 1856 Ans.
- (D) 1738

20.Scholars in the late nineteenth and early twentieth centuries were primarily interested in the histories of:

- (A) kings
- (B) travellers
- (C) inventions Ans.
(D) None of the Above 21.Scholars from the mid-twentieth century onwards, were primarily interested in the histories of ...... . (A) Kings

(B) Issues such as economic change, different social groups, etc.

- (C) Religious beliefs of people
- (D) Marginalised groups.

22.Name the language in which the Ashokan inscriptions were written.

(A) Pali, Prakrit and Greek (B) Pali, Sanskrit and Aramaic (C) Pali, Prakrit and Aramaic (D) Pali, Sanskrit and Greek Q

23.Sangam is a literature of ..... language.

- (A) Tamil
- (B) Malayalam
- (C) Sanskrit
- (D) Marathi

24.Rajagaha which was a capital of Maghadha, was a fortified settlement, located amongst hills. Later, in the fourth century BCE, the capital was shifted to Pataliputra, present-day Patna. Idenify the incorrect reason about choosing the city of Patliputra in this aspect.

(A) Patiliputra is situated at the bank of the river Ganga which was a commanding route of communication along the Ganga.

(B) It's central location in northeastern India led rulers of successive dynasties to base their administrative capital here.

(C) It is Situated at the confluence of the Ganges, Gandhaka, and Son rivers, Pataliputra formed a "water fort or jaldurga.

(D) Pataliputra is the capital of Nandas, Mauryans, Sungas and the Guptas down to the Cholas.

#### Section B

24. Which of the following options given in Sangam text accurately describes 'Vellalar 'and 'Adimai', as two categories of peasants in South Indian villages.

- A. Vellelar, a ploughman and Adimai as landowner
- B. Vellelar a landowner and Adimai a peasant
- C. Vellelar a Peasant and Adimai a land lord
- D. Vellelar a landowner and Adimai a slave

26. Read the following information and identify the practitioners of a sub-discipline of archaeology.

They are the specialists in ancient animal remains. They tried to study and understand the Harappans subsistence strategies through animal bones and found at Harappan sites and indicated that Harappan domesticated few animals.

- A. Archaeo-Botanist
- B. Archaeo- Zoologist
- $C. \ \ Geo-Archaeologists$
- D. Anthropologists
- 27. Which of the following pairs associated with Buddha's symbolic representation is incorrect?
- A. Empty seat Meditation of Buddha
- B. Wheel- Sermon of Buddha
- C. Bodhi Tree- Birth of Buddha
- D. Stupa- Mahaparinibbana

**28.** Identify the character of Mahabharata with the help of the following information.

- Guru or Mentor of Kaurvas and Pandvas
- Did not accept Eklavya as his disciple
- A. Guru Vashsishtha
- B. Guru Vyasa
- C. Guru Sandeepni
- D. Guru Dronacharya

29. Which of the following statements about Mahajanpadas are correct?

I. Mahajanapadas were Magadha, Koshala, Gandhara and Avanti only II. Most

Mahajanpadas were ruled by kings.

- III. Some, known as ganas or sanghas, were oligarchies ruled under rajas.
- IV. Each Mahajanpada had a capital city, which was often fortified.

Options:

- A. I,II &II
- B. II,III,IV
- C. I,III,&IV
- D. I,II &IV

30. Two statements are given in the question below as Assertion (A) and Reasoning (R). Read the statements and choose the appropriate option.

**Assertion (A)**: From c. 500 BCE norms were compiled in Sanskrit texts known as the Dharmasutras and Dharmashastras.

Reason (R): Brahmanas laid the codes of social behaviour for the society in general. Options:

- A. Both A and R are true, and R is the correct explanation of A.
- B. Both A and R are true, but R is not the correct explanation of A.
- C. A is true but R is false.
- D. A is false but R is true.
- 31. Which of the following options is the most probable explanation for the incorporation of the' Shailabhanjika' Motif in the Sanchi Stupa?
  - A. Mahaparinibbana
  - B. Strength & wisdom
  - C. Auspicious symbol
  - D. Religious idol

**32**. Consider the following statement (s):

I. the Harappan civilisation was the development of urban centres.

II the most distinctive features of Harappan cities were the carefully planned drainage system III Harrapan roads and streets were laid out along an approximate "grid" pattern

Which of the above statement (s) is/are correct about Harappa Civilisation?

- A. Only I
- B. Only II
- C. I&II
- D.I, II & III

33. Identify the character of Mahabharata with the help of the following information.

- Belonged to the Rakshasa clan
- Married with Bheema
- Mother of Ghatotkacha
- A. Hidimba
- B. Subhadra
- C. Draupadi

#### D. Gandhari

34. He was called as 'Devanampiya' and Piyadassi'. He ruled the Indian subcontinent fromc. 268 to 232 BCE. He is remembered for the propagation of Dhamma.Who among thefollowing ruler has been described in the above information?

- A. Ashoka
- B. Chandragupta Maurya
- C. Samudra Gupta
- D. Ajatshatru
- 35. Match the following

#### Archeologist

#### **Role /Contributions**

- (a) Alexander Cunningham
  (b) Daya Ram Sahni
  (c) John Marshall
  (ii) Discovered seals at Harappa
  (iii) First Director General of ASI
  (iii) Brought a military precision in archaeology
  - (d) R E M Wheeler (iv) Announced the discovery of a new civilization Options:

(a)	(b)	(c)	(d)					
A	(ii)	(i)	(iv)	(iii)				
В	(iv)	(iii)	(ii)	(i)				
С	(i)	(ii)	(iii)	(iv) D	(i)	(iii)	(ii)	(iv)

36 Which of the following information is/are correct about the Vijayanagar empire? I. Its first dynasty was the Sangama dynasty.

- II. Tuluvas were replaced by the Aravidu .
- III. Krishnadeva Raya belonged to the Suluva dynasty.
- IV. Harihara and Bukka were from Aravidu dynasty

#### **Options**:

- A. II&III
- B. I&III
- C. I&IV
- D. I&II

37.The twelfth century witnessed the emergence of a new movement as Virashaiva tradition. This continues to be an important community in the region to date. Our understanding of this tradition is derived from vachanas composed by women and men who joined the movement.

Which of the following statement is correct about this tradition? A. It emerged in Kerala.

- B. It was led by a Basavanna .
- C. Their followers were known Nayanars.

- D. They supported the idea of caste and theory of rebirth.
- 38. Which one of the following is a correct pair?

LIST-II

- Rulers Regions
- A. Cholas Tamil Nadu
- B. Hoysalas Orissa
- C. Sultans Karnataka
- D. Gajapati Deccan

**39**. Read the following information given in the box carefully:

- She was a Rajput princess from Merta in Marwar.
- She considered Lord Krishna as her lover.

Identify the name of the devotee of Saguna Bhakti from the following options A. Andal

LIST-I

- B. Gargi
- C. Meera Bai
- D. Maitreyi

40. Read the following statements:

- I. Krishnadeva Raya's rule was characterised by expansion and consolidation.
- II. There was peace and prosperity in his empire.
- III. He was credited with building some fine temples.
- IV. He was defeated in the Battle of Rakshi Tangadi.

Which of the above statements are related to Krishnadeva Raya?

- A. Only I
- B. I, II and III
- C. II, III and IV
- D. I, III and IV

41. Fill in the blank:

Strategy used by Harappans for procuring raw materials may have been to send expeditions to areas such as the ------ region of Rajasthan (for copper) and south India (for gold).

Select the appropriate option:

A. Khetri

- B. Alvar
- C. Vagad
- D. Marwar

42. Which one of the following teaching is not associated with the teachings of Mahavira or Jaina Philosophy?

- A. The entire world is animated.
- B. Ahimsa (Non-Violence)
- C. The cycle of birth and rebirth is not related to Karma.
- D. Monastic existence is a necessary condition of salvation.
- 43. Which one of the following statements related to Buddhism is not correct?
- A. Pilgrims such as Fa Xian and Xuan Zang travelled from China to India for knowledge.
- B. Bodisattas were perceived as deeply compassionate beings.
- C. Bodhisattas accumulated merit through their efforts and used it to attain *Nibbana* D. Mahayana literally means the 'great vehicle'

44. Read the following statements regarding Sufism in India:

I. They turned to asceticism and mysticism in protest against the growing materialism II. They sought an interpretation of Quran on the basis of their experience.

III. Amir Khusroe was the disciple of Shaikh Nizamuddin Aulia. IV. Sheikh Muinuddin Sijzi was from Delhi.

#### Which of the following statements are correct?

- A. I,II, and III
- B. III,IV and I
- C. I,III and IV
- D. II and IV

45. Given below are two statements, one labelled as Assertion (A) and the other labeled as

Reason(R):

Assertion –(A)-Krishnadeva Raya's rule was characterized by expansion and consolidation.

**Reason-(R)**- Vijayanagar kingdom acquired land between Tungabhadra and Krishna River due to its military preparedness.

From the above assertion and reason, find out which one of the following is true:

- A- Both **A** and **R** are true and R is the correct explanation of A.
- B- Both A and R are false.
- $C- \quad A \text{ is correct but } R \text{ is not correct.}$
- $D- \quad \textbf{R} \text{ is correct but } \textbf{A} \text{ is not correct.}$
- 46.



.Look at the figure above Which school of art is evident on the image of Bodhisatta?

- A. Gandhara School of Art
- B. Mathura School of Art
- C. Greeco-Roman School of Art

# **©** SOURCE BASED QUESTIONS

# 1 The Sudarshana (beautiful) Lake in Gujarat

The Sudarshana lake was an artificial reservoir. We know about it from a rock inscription (2nd century CE) in Sanskrit, composed to record the achievements of the Shaka ruler Rudradaman.

The inscription mentions that the lake, with embankments and water channels, was built by a local governor during the rule of the Mauryas. However, a terrible storm broke the embankments and water gushed out of the lake. Rudradaman, who was then ruling in the area, claimed to have got the lake repaired using his own resources, without imposing any tax on his subjects.

Another inscription on the same rock (c 5th century) mentions how one of the rulers of the Gupta dynasty got the lake repaired once again. All India 2014

47) Sudarshana lake was an

A.River

B.Lake

C.Reservoir

D.Sea

48) The king associated with it is a ruler of which dynasty?

A.Satvahana.

B.Mauryan

C Shaka.

D.Gupta

49) How many times was the lake repaired?

A.Once.

**B.Twice** 

C.Thrice.

D.Four times

50) When was the rock inscription composed?

A.1<sup>st</sup> century BCE.

B.2<sup>nd</sup> century CE

C.3<sup>rd</sup> century CE.

D.5<sup>th</sup> century CE

51)The Rock inscription was composed to record whose achievements?

A.Asoka.

B.Bimbisara

C.Samudragupta.

D.Rudradaman

52) During whose rule was the the lake built?

A.Gupta.

**B.Shakas** 

C.Mauryan.

D.Satvahana

# SOURCE BASED QUESTIONS

1 A Tiger-Like Husband

This is a summary of a story from the Adi Parvan of the *Mahabharata*.

The Pandavas had fled into the forest. They were tired and fell asleep; only Bhima, the second Pandava, renowned for his powers, was keeping watch. A man-eating rakshasa caught the scent of the Pandavas and sent his sister Hidimba to capture them. She fell in love with Bhima, transformed herself into a lovely maiden and proposed to him. He refused. Meanwhile, the *rakshasa* arrived and challenged Bhima to a wrestling match. Bhima accepted the challenge and killed him. The others woke up hearing the noise. Hidimba introduced herself and

declared her love for Bhima.

She told Kunti, "I have forsaken my friends, my dharma and my kin; and good lady, chosen your tiger-like son for my man...whether you think me a fool or your devoted servant, let me join you, great lady, with your son as my husband." Ultimately, Yudhisthira agreed to the marriage on one condition that they would spend the day together, but that Bhima would return every night.

The couple roamed all over the world during the day. In due course, Hidimba

gave birth to a *rakshasa* boy named Ghatotkacha. Then, the mother and son left the Pandavas. Ghatotkacha promised to return to the Pandavas whenever they needed him.

Some historians suggest that the term *rakshasa* is used to describe people whose practices differed from those laid down in Brahmanical texts. **Delhi 2016, All India 2012** 

A.Draupadi.

B.Hidimba

C.Both A and B

D.None of these

54) Who challenged Bhima to a wrestling match?

A.Rakshasa.

B.Ghatotkacha

C.Duryodhan.

D.Dushasana

55) Who agreed to Bheem's marriage with Hidimba?

A.Arjuna.

B.Kunti

C.Yudhisthira.

D.Dronacharya

56) Whom did Hidimba gave Birth to?

A.Ghatotkacha.

B.Abhimanyu

C.Barbarik.

D.Karna

57)Who was the Pandavas who was awake?

A.Yudhisthira.

B.Arjuna

C.Bheem.

D.Sahdev

58) Whom Did Hidimba approach for her Marriage with Bhima?

A.Bhima.

**B.Yudhisthira** 

C.Kunti.

D.Rakchas

### Section D

59. On the given outlinemap of IIndia two places associated with Asokan Pillar inscriptions are marked as 1 and 2. Choose the correct answer given from the choices below

- A. Meerut and Kaushambi
- B. Sanchi and Meerut
- C. Topra and Kausambi
- D. Sarnath and Topra



60. On the given political map of India, two centres of Bhakti tradition by Mirabai and Basavanna have been marked as 1 and two respectively. Identify them and choose the correct answer

- A. Rajasthan and Karnataka
- B. Gujarat and Andhra pradesh
- C. Kerala and Rajasthan
- D Gujarat and Tamilnadu



# Political Science (028) Section A

1. Newly independent countries got an option to stay away from any of the alliances, since the time\_\_\_\_\_was created.

- a) NATO
- b) CENTO
- c) Warsaw Pact
- d) NAM

2. The smaller states were important for super powers due to:-

- i. Vital resources
- ii. Territory
- iii. Economic support

Identify the correct option.

- a) i & iii
- b) i & ii
- c) ii & iii
- d) i, ii & iii
- 3. Who appoints the Vice-Chairperson of NITI Aayog?
- a) The Prime Minister
- b) The President
- c) The Chief Executive Officer
- d) The Finance Minister

4. Which among the following statements about Soviet System is not true:-

- a) The Soviet Union had complex communication.
- b) It had a complex machinery production system and transport sector that connected its remotest areas with efficiency.
- c) It had a domestic consumer industry that produced everything from pins to cars.
- d) Soviet Union disintegrated in 1992.
- 5. \_\_\_\_\_Policy has been adopted by NITI Aayog.
- a) Make in India
- b) Made in India
- c) Startup India
- d) Ayushman Bharat
- 6. Who were the three leaders who floated the idea of NAM?
- a) Nehru, Tito, Nasser
- b) Nehru, Sukarno, Shah
- c) Nehru, Nkrumah, Shah
- d) Nehru, Shah, Tito
- 7. Where did Pakistan conduct its nuclear tests?
- a) Patkai hills
- b) Chagai hills
- c) Naga hills
- d) Kargil hills
- 8. Which was the biggest challenge before the newly independent India?
- a) National Integration
- b) Industrialisation
- c) Population
- d) Unemployment
- 9. Which of these statements about Non-Aligned Movement is incorrect?
- a) Enabling newly decolonized countries to pursue independent policies
- b) Refusal to joining any military alliance
- c) Following a policy of neutrality on global issues
- d) Focus on elimination of global economic inequalities
- 10. Arrange the following in the chronological order of their establishment:
- i) The World Trade Organisation
- ii) Amnesty International

### iii) League of Nations

- iv) World Bank
  - a) iii, iv,i, ii
  - b) iv, iii, ii, i
  - c) ii, iii, iv, i
  - d) i, ii,iii, iv
- 11. Which from the following is concerned with the safe and peaceful use of nuclear technology under the UN System:
- a) UN International Safeguard Committee
- b) UN Security Council
- c) International Atomic Energy Agency
- d) Amnesty International

12. India conducted its I and II nuclear tests at Pokhran in the year \_\_\_\_\_ and \_\_\_\_\_.

- a) 1978, 1991
- b) 1971, 1992
- c) 1974,1998
- d) 1974, 1996
- 13. The Arab Spring did not transcend which of the following countries?
- a) Tunisia
- b) Libya
- c) Iran
- d) Yemen

14. Which among the following is not an outcome of the disintegration of the USSR?

- a) End of the ideological war between the US and the USSR.
- b) Birth of CIS.
- c) Change in balance of power in the world order.
- d) Crisis in the Middle East.

15. The three major objectives of Nehru's foreign policy were:

- i) To preserve the hard-earned sovereignty.
- ii) To protect territorial integrity.
- iii) To promote rapid economic development.
- iv) To establish a Capitalist System in India.

Select the correct answer using the force given below:

- a) i, ii and iv only.
- b) ii, iii and iv only.

- c) i, ii and iii only.
- d) ii, iii and iv only.

16. Which of the following is not the disputed site between India and China?

- a) Doklam
- b) Galwan Valley
- c) Depsang Plains
- d) Lipulekh Pass

17. The Nizam wanted an independent status for Hyderabad. He entered into what was called the standstill agreement with India in November 1947 for \_ while negotiations with the Indian Government were going on.

- a) A year
- b) Three years
- c) Two years
- d) Six months

18. "The foreign policy of a country is the outcome of her economic policy" these remarks were made by –

- a) Indira Gandhi
- b) Jawahar Lal Nehru
- c) Morarji Desai
- d) Charan Singh
- 19. The high point of Cold War was -
- a) Cuban Missile Crisis.
- b) Atomic bomb attack on Hiroshima and Nagasaki.
- c) Establishment of SEATO and CENTO.
- d) Establishment of NATO
- 20. What is "Amnesty International"?
- a) Nuclear Safety Organisation
- b) Government organisation
- c) Non-Government organisation
- d) Human Development Organisation
- 21. Choose the odd one out of the following statements.
- (a) States Reorganization Act-1956
- (b) Partition of India-1947
- (c) Number of Princely States-512
- (d) Independence of India-1947

22. What was the impact of the Indo-China Conflict on the opposition parties?

i) The CPI, which was in favour of the Soviet Union, grew closer with the Congress.

- ii) The Communist Party of India broke up in 1963.
- iii) Alerted the leaders of India about the situation in the Northeast.
- iv) Nagaland was given state status.

Select the correct answer using the force given below:

- a) i, ii and iii only.
- b) iii only.
- c) i and iii only.
- d) i only.

23. The Russian Revolution was inspired by the ideals of \_\_\_\_\_as opposed to capitalism and the need for an \_\_\_\_\_Society.

- a) Socialism, Egalitarian
- b) Communal, Religious
- c) Socialism, Religious
- d) Communal, Egalitarian

24. Which one of the following statements is false .:-

- a) The Nizam of Hyderabad was keen to have an independent status for the state of Hyderabad.
- b) Jammu and Kashmir was ready to sign the Instrument of Accession.
- c) The issue of Junagarh was resolved after a plebiscite in the state.
- d) Travancore was not the first Indian State to merge into the Union of India.

# Section B

25. Why didn't war happen during the Cold War?

- a) Due to theory of Deterrence
- b) Due to NAM
- c) Due to Cuban Missile Crisis
- d) Active involvement of the UN

26. Why did Russia become the successor of USSR?

- a) Russia led the formation of CIS
- b) It inherited the Soviet seat in the UN
- c) It was the largest republic
- d) Boris Yeltsin was more charismatic than Gorbachev

Select the correct answer using the force given below:

i) a and c only.

- ii) b and c only.
- iii) a and d only.
- iv) b and d only

27. Since the Nagpur session of the Congress in 1920, this principle was accepted that the reorganization of states would be on a linguistic basis. Despite this, the leaders were against it after independence because---

- i) Things change after independence and partition.
- ii) Might lead to disruption and disintegration.
- iii) To adopt a mixed economy.
- iv) To adopt a planned economy.

Select the correct answer using the force given below:

- a) ii and iv only.
- b) lii and iv only.
- c) I and ii only.
- d) I and iii only.
- 28. Years after the end of cold war, the Central Asian Republic have not risen to the global availability of opportunity why?
- a) Backdrop of soviet influence.
- b) Authoritarianism in the countries.
- c) US involvement
- d) Traditionally isolated nature of the countries

29. Sardar Vallabhbhai Patel was entrusted with the task of unification of the princely states. Which of the following argument is not correct?

- a) He had a long political experience.
- b) He was a visionary and a good speaker.
- c) Muslim League wanted that the task of integration should be entrusted to Sardar Vallabbhai Patel.
- d) He was the Home Minister as well as the Minister of Concession Department.
- 30. Why did the Indian Government sign the treaty with the Soviet Union in 1971?
- a) India needed diplomatic and military support during the Bangladesh crisis.
- b) India was very close to the USSR.
- c) India wanted to stay away from the USA.

- d) For strengthening friendship.
- 31. Consider these statements about NITIAayog.

Find the Wrong statement.

- a) NITI Aayog acts as a think tank of the Union Government.
- b) NITI Aayog does not ensure the spirit of Cooperative Federalism.
- c) The Prime Minister of India is the Ex Officio Chairman of NITI Aayog.
- d) Dr. Rajiv Kumar is the current Vice Chairperson of NITI Aayog.

32. Shock Therapy is a phenomenon associated with

- a) Central Asian conflicts in Tajikistan and Azerbaijan
- b) New International Economic Order
- c) US plans to root out communism
- d) Stabilizing the Russian currency against the US dollar

33. The term 'the largest garage sale in history' is associated with:-

- a) Cuban Missile Crisis
- b) Gulf War
- c) Bolshevik Revolution
- d) Shock Therapy

34. **Assertion:** The Cold War was neither a war or an armed military conflict nor a condition of peace. It was rather a state of uneasy peace.

**Reason:** The Cold War was not being fought by clever moves, propagandist activities and diplomatic conflicts.

a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

b) Both the Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

- c) The Assertion is incorrect but the Reason is correct.
- d) The Assertion is correct but the Reason is incorrect.

35. Which situation was termed by US President George Bush as the New World Order?

a) The United Nations had given permission for Operation Desert Storm.

- b) The United Nations had given permission for Operation Iraqi Freedom.
- c) To know averted Cuba missile crisis

d) Defeat in the war of Iraq.

36. The result of Arab Spring was:

a) Autocratic dictatorship

b) Socialist system

- c) Post cold war
- d) Capitalist system

37. NITI Aayog serves as a think-tank to promote \_\_\_\_\_\_\_federation where government acts as a \_\_\_\_\_\_ with the help of technology. Select the correct option.

- a) Competitive, controller
- b) Comparative, central authority
- c) Cooperative, facilitator
- d) Correlated, enabler

38. Why was the Planning Commission replaced by NITI Aayog?

- a) More push was required to cope with the pressing challenges of development.
- b) The Planning Commission was unacceptable by thepeople.
- c) The Planning Commission was not desirable by the leaders.
- d) It was inadmissible by the opposition.
- 39. Given the contemporary realities of the world, how can the UN play a more important role?
- a) By being more assertive about human rights violations and calling for change.
- b) By letting the regional powers take change.
- c) By indulging US-China to resolve disputes.
- d) By being proactive and sending peace keeping forces to resolve territorial disputes.

40. **Assertion:** In April 1949,North Atlantic Treaty Organisation was an association of 12 states which declared that armed attack on any one of them in Europe or North America would be regarded as an attack on all of them.

**Reason:** Each state would be obliged to help theother.

- a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- b) Both the Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- c) The Assertion is incorrect but the Reason is correct.
- d) The Assertion is correct but the Reason is incorrect.

41. **Assertion:** International Organisations play a very important role in maintaining peace.

**Reason:** Countries have conflicts and differences with each other.

- a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- b) Both the Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- c) The Assertion is incorrect but the Reason is correct.
- d) The Assertion is correct but the Reason is incorrect.

42. **Assertion:** All members of the UN have one vote. However, the permanent members can vote in a negative manner.

**Reason:** The developing world consists of countries at many different levels of development.

- a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- b) Both the Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- c) The Assertion is incorrect but the Reason is correct.
- d) The Assertion is correct but the Reason is incorrect.

43. **Assertion**: The Soviet union had become stagnant in anadministrative and political sense as well.

Reason: The Soviet system was based on the ideology of socialism.

(a) Both the Assertion and the Reason are true and the Reason is the correct explanation of the Assertion.

(b) Both the Assertion and the Reason are true, but the Reason is not the correct explanation of the Assertion.

(c) The Assertion is true, but the Reason isfalse.

(d) The Assertion is false, but the Reason is true.

44. Choose the number of incorrect argument/arguments as far as India's claim to a permanent seat in the Security Council is concerned

i. India has made financial contributions to the UN and always faltered on its payments.

ii. India has emerged as an economic power on the world stage.

iii. India has participated in virtually all of the initiatives of the United Nations.

iv. India's role in the United Nations' peacekeeping force is a long and substantialone.

a) i is incorrect.

- b) ii and iii are incorrect.
- c) ii, iii and iv are incorrect.

d) All are incorrect.

45. **ASSERTION:** NITI Aayog is a non-constitutional body.

**Reason:** The Chief Minister of India is the Ex-Officio Chairman of NITI Aayog.

(a) Both the Assertion and the Reason are true and the Reason is the correct explanation of the Assertion.

(b) Both the Assertion and the Reason are true, but the Reason is not the correct explanation of the Assertion.

(c) The Assertion is true, but the Reason is false.

(d) The Assertion is false, but the Reason is true.

46. In which of the following matters do International Organisation help?

a) To establish better living conditions democratic countries.

- b) In matters of peace & war.
- c) To prevent violations of human rights.
- d) To resolve territorial disputes.
- A) a,b,c,d
- B) a & d
- C) a&c
- D) b&c

47. The re-organization of the states on the basis of language had a negative effect:

- a) The concept of power sharing was realized.
- b) The principle of variation was accepted.
- c) A uniform basis was found for the demarcation of the states.
- d) Movements started in many areas of the country demanding the formation of small separate states.

48. During the Nehru era, why did some political parties and groups in our country believe that India should be more friendly with the bloc led by the US?

a) Because the US bloc claimed to be pro-democratic and promoted Capitalism.

- b) The US always favoured India.
- c) The US supported India in all its policies.
- d) The US was very close to India.

# Section C

# 49. Study the picture given below and answer the question that follows:

Choose the first state to be created due to linguistic demands after independence:

- a) Gujarat
- b) Andhra Pradesh
- c) Assam
- d) Rajasthan

# This question is for Visually Impaired Candidates only.

When did the central Government appoint the states reorganisation commission?

- a) 1956
- b) 1954
- c) 1958
- d) 1953
- 50. Study the picture given below and answer the question that follows:



What does this logo symbolise?

- a) Global progress
- b) World peace
- c) Equity in the world.
- d) Harmony amongst the people.

# This question is for Visually Impaired Candidates only.

The United Nations was set up through the signing of the UN charter by:

- a) 61 states
- b) 51 states
- c) 71 states
- d) 81 states
- 51. Study the cartoon given below and answer the question that follows:



The message that this picture gives is\_

- a) Denuclearization of the world is the need.
- b) Use of military power to control the world.
- c) Believe in peace and moving ahead together.
- d) Colonisation of the world is not to be appreciated.

## This question is for Visually Impaired Candidates only.

Within the UN, the influence of the US is considerable. Choose the Incorrect reason for the same

- a) The UN is Physically located within US territory.
- b) The US has many nationals in the UN Bureaucracy.
- c) The US is the largest contributor to the UN.
- d) The US was the least powerful country when the UN came into being.

# Read the given passage carefully and answer the questions that follow :

Thus it was decided that what was till then known as 'India' would be divided into two countries, 'India' and 'Pakistan'. Such a division was not only very painful, but also very difficult to decide and to implement. It was decided to follow the principle of religious majorities. This basically means that areas where the Muslims were in majority would make up the territory of Pakistan. The rest was to stay with India. The idea might appear simple, but it presented all kinds of difficulties.

52. Why did the partition of India in 1947 prove to be very painful?

- a) The general public was in favor of the partition.
- b) The leaders of the two countries handled it properly.
- c) People were divided on the basis of language.
- d) It was the largest, most abrupt, unplanned and tragic transfer of population.

53. What major difficulty/difficulties arose in the way of partition?

- a) There was no single belt of Muslim majority areas in British India.
- b) All Muslim majority areas did not want to be in Pakistan.
- c) Neither (a) nor (b).
- d) Both (a) and (b).

54. What would have been India's position in the world, had there been no partition of India?

i) India would have been a much larger nation in terms of territorial area.

- ii) India would have played a more vital role in the world scenario.
- a) i is correct.
- b) ii is correct.
- c) Both are correct
- d) Both are incorrect.

55. What led to the decision for the creation of Pakistan? Choose the incorrect statement as the reason -

- a) Political competition between Muslim League and Congress.
- b) Several political developments in 1940's.
- c) Role played by the British.
- d) Failure of the Interim Government.

#### Read the given passage carefully and answer the questions that follows;

India's nuclear policy has always been peace-oriented, whose clear impression is reflected in the policy of 'No First Use'. But in view of contemporary regional security challenges, the present government has made it clear that the policy of 'No First use' can be reviewed and changed in consonance with India's regional and national security.

In addition, India is committed to ensuring its membership in the Nuclear Suppliers Group (NSG) and opposing partisan and unjust nuclear treaties like CTBT and NPT.

56. Why was the policy of 'No First Use' reviewed and changed?

- a) India is not a peace-oriented nation any more.
- b) India wants to be a permanent member of UNSC.
- c) India's regional and national security is paramount.
- d) All of these.

57. India wants to ensure its place in\_\_\_\_\_.

- a) United Nations Security Council.
- b) International Atomic Energy Agency.
- c) National Security Guard
- d) Missile technology control regime
- 58. Which one is the correct option for CTBT?
- a) Compact Test Ban treaty.
- b) Comprehensive Testing Ban Treaty.
- c) Comprehensive Test Ban Treaty.
- d) Compact Testing Ban Treaty.
- 59. India's Nuclear Policy reiterates its resolve in:
- a) Establishing its regional supremacy
- b) Establishes it as the guardian of SAARC
- c) Establishing disarmament and regional peace
- d) Engage in hostilities with others

60. Indian Foreign Policy is driven by a wide range of factors. Identify the incorrectone.

- a) National Integration.
- b) Protection of International Boundaries.
- c) Alliance Building.
- d) National Interest.

#### PRACTICE PAPER III

#### BUSINESS STUDIES

#### CLASS XII

- 1. Which of the following is not an element of social environment?
  - A. Birth and Death rate
  - B. Constitution of the country
  - C. Population Shifts
  - D. Life expectancy
- 2. Name the function of management which helps in the formulation of future plans, in he light of the problems that were identified and thus, helps in better planning in the future period.
  - A. Planning
  - B. Organising
  - C. Directing
  - D. Controlling
- 3. \_\_\_\_\_\_ is the process by which the manager brings order out ofchaos, removes conflict among people over work or responsibility sharing andcreates an environment suitable for teamwork.
  - A. Planning
  - B. Organising
  - C. Staffing
  - D. Controlling
- 4. ------ ensures that the heads of separate business units in theorganisation are responsible for profit or loss of their unit and have authority over it.
  - A. Span of management
  - B. Divisional Structure
  - C. Functional structure
  - D. Hierarchy of Authority.
- 5. Organisation structure establishes relationships between \_\_\_\_\_
  - a. organisation and environment
  - b. people, work and resources
  - c. organisation and society
  - d. suppliers and customers
- 6. Divisional structure leads to conflict in \_\_\_\_
  - (a) resource allocation
  - (b) marketing management
  - (c) motivation
  - (d) planning process
- 7. Degree of decentralization indicates \_\_\_\_\_
  - (a) degree of authority delegation
  - (b) degree of responsibility
  - (c) degree of power delegation
  - (d) degree of accountability
- 8. Which of the following is not a feature of planning?
  - (a) primary function
  - (b) pervasive
  - (c) arranging resources

- (d) mental exercise
- 9. Organising does not include \_\_\_\_
  - (a) what will be done
  - (b) how will be done
  - (c) by whom will be done
  - (d) where will be done
- 10. Which of the following is not a part of organizing process?
  - (a) division of work
  - (b) assigning of responsibilities
  - (c) specialization
  - (d) establishing reporting relationships
- 11. Grouping of activities in accordance to their nature is \_\_\_\_\_
  - (a) division of work
  - (b) departmentalization
  - (c)specialization
  - (d) none of these
- 12. Management is a process of \_\_\_\_\_
  - a. getting things done
  - b. achieving goals effectively
  - c. achieving goals efficiently
  - d. all the above
- 13. Which of the following is not a function of management ?
  - a. Planning
  - b. staffing
  - c. coordination
  - d. controlling
- 14. Which of the functions of management ensures completing work as planned ?
  - (a) coordinating
  - (b) controlling
  - (c) directing
  - (d) organizing
- 15. Which of the following is a social objective ?
  - a. providing good working conditions to workforce
  - b. providing good quality products at reasonable price
  - c. providing good returns to investors
  - d. utilizing human and material resources optimally
- 16. Management is \_\_\_\_\_
  - a. an art
  - b. a science
  - c. neither science nor art
  - d. both a science and an art
- 17. The following is not an objective of management
  - a. earning of profits
  - b. growth of the organization
  - c. providing employment
  - d. policy making
- 18. Which of the following characteristics of science is not applicable to management ?
  - (a)well defined body of knowledge

- (b) universally applicable principles
- (c)based on experiments
- (d) all the above
- 19. Which level of management sets targets for work force ?
  - a. top level management
  - b. middle level management
  - c. lower level management
  - d. all the above
- 20. Which of the following belongs to middle level management ?
  - a. chief operating officer
  - b. factory head
  - c. factory supervisor
  - d. none of the above
- 21. Principles of management are \_\_\_\_
  - a. values of the organization
  - b. techniques
  - c. general guidelines
  - d. part of pure science
- 22. The principles of management are significant because of \_\_\_\_\_
  - a. increase in efficiency
  - b. initiative
  - c. optimum utilization of resources
  - d. adaptation to changing technology
- 23. Work study does not include \_\_\_\_\_
  - a. method study
  - b. standardization
  - c. fatigue study
  - d. differential piece wage system
- 24. Which of the foreman are not under planning incharge ?
  - a. time and cost clerk
  - b. disciplinarian
  - c. gang boss
  - d. route clerk
- 25. Which of the following principles advocates ' One Head One Plan' ?
  - a. unity of direction
  - b. unity of command
  - c. scalar chain
  - d. none of the above
- 26. Differential piece wage system
  - a. ensures job satisfaction among workers
  - b. increases productivity
  - c. motivates workers
  - d. all the above
- 27. ------ is the process of dividing work into manageable activities and then grouping the activities which are similar in nature.
  - A. Coordination
  - B. Departmentalisation
  - C. Organisation Structure

- D. Delegation of authority
- 28. Large scale production done to reduce the average cost of production is the essence of \_\_\_\_\_ concept of Marketing Management.
  - (a) Product
  - (b) Selling
  - (c) Production
  - (d) Marketing
- 29. Even Though the political conditions vary from country to country, they impact the sentiment of an investor in the business, if the instability of the political conditions cause

uncertainty and make it difficult for him to predict the future. Which feature of theBusiness environment is being highlighted in the above statement?

- A. Specific and general forces
- B. Dynamic nature
- C. Relativity
- D. All the above.
- 30. "Even after opening up of the Indian economy in 1991 foreign companies found itextremely difficult to cut through the bureaucratic red tape to get permits for doingbusiness in India, which created a negative impact on business." Identify the dimension of the business environment which led to creation of the negative impact on business.
  - A. Social Environment
  - B. Technological
  - C. Political Environment
  - D. Legal Environment
- 31. Name the process of working with and through others to effectively achieveorganisational objectives by efficiently using limited resources in a changingenvironment.
  - A. Management
  - B. Planning
  - C. Organising
  - D. Controlling.
- 32. "The increase in the demand for many Ayurvedic medicines, Health products and services in the past few months, is related to the need for building immunity and an increased awareness for health care due to the spread of Corona virus." Identify thefeature of business environment being described above.
  - A. Specific and general forces
  - B. Interrelatedness
  - C. Relativity
  - D. None of the above

Read the following text and answer the following questions on the basis of thesame: (Q.No. 33 to 36) Sana is the branch manager of ABC Handicrafts Pvt. Ltd. The company'sobjective is to promote the sales of Indian handloom and handicraft products. Itsells fabrics, furnishings, ready-mades and household items are made out oftraditional Indian fabrics.Sana decides quantities, variety, colour and texture of all the above items and thenallocates resources for their purchase form different suppliers. She appoints a teamof designers and crafts people in the company, who developed some prints for bed covers in bright colour on silk. Although the products looked very attractive and impressive, they were relatively expensive on the front of affordability for an average customer. Sana suggested that they should keep the silk bed covers for special festive occasions and offer the cotton bed covers on a regular basis to keep costs undercontrol.

33. "She appoints a team of designers and crafts people in the company, whodeveloped some prints for bed covers in bright colour on silk." Which function of management is highlighted in this context?

(A) Controlling

(B) Staffing

(C) Planning

(D) Directing

34. In the above case "company's objective is to promote the sales of Indianhandloom and handicraft products."

The above line focus on which feature of management?

(A) Management is an intangible force

(B) Management is a goal oriented process

(C) Management is pervasive in nature

(D) Management is a continuous process

35. With reference to the above case, at which level of management Sana isworking?

(A) Lower level

(B) Top level

(C) Middle level

(D) Shop floor

36. "Sana suggested that they should keep the silk bed covers for special festiveoccasions and offer the cotton bed covers on a regular basis to keep costs undercontrol."

Which function of management is highlighted in this context?

(A) Controlling

(B) Staffing

(C) Organising

(D) Planning

Read the following text and answer the following questions on the basis of the same:

(Q.No. 37 - 40)

The name and taste of Coca-Cola is known to almost each and every individual in India as well asthroughout the world. This carbonated soft drink holds the most market share in the soft drink marketand got itself a special seat in each and every gathering. The Coca-Cola Company has on occasionintroduced other cola drinks under the Coke name. The most common of these are Diet Coke, alongwith others including Caffeine free Coca-Cola, Diet Coke Caffeine free, Coca-Cola Zero Sugar, Coca-Cola Cherry, Coca-Cola Vanilla and the list goes on. It has capitalized on each and every opportunity tomarket itself effectively and place itself in the middle of every gathering. The main reason for such an outstanding placement of product goes to the way they have established theconnection between every occasion and the need for Coke to be present there, product design andcreative advertising.

37. In the context of the above given case, identify one valid importance of Business Environment.

a) Enables a firm to identify opportunities and getting first mover advantage

b) Uncertainty

c) Delay in action

d) Pervasive function

38. Identify the feature of Business Environment which The Coca-Cola Company managed to get in theirfavour.

- a) Complex
- b) Specific and general forces
- c) Futuristic
- d) Mental Exercise
- 39. Which business environment did Coca-Cola majorly tap into?
  - a)Technological Environment
  - b)Social Environment
  - c) Political Environment
  - d) Economic Environment
- 40. Which of the following is not a product of COCA-COLA?
  - a) Diet Coke Caffeine free
  - b) Coca-Cola Zero Sugar
  - c) Coca-Cola Avocado
  - d) Coca-Cola Cherry
- 41. Kashish is running a take away restaurant in Delhi under the name 'Eat Out'. Keeping in view the pandemic situation, she has made certain changes in the process of packaging and delivery of orders.
  - Identify the characteristic of management which is highlighted in the above paragraph.
  - (A)Management is a goal oriented process
  - (B)Management is multidimensional
  - (C)Management is a dynamic function
  - (D) Management is an intangible force
- 42. "Management has to see that tasks are completed and goals are achieved with the least amount of resources at a minimum cost." Identify the two related concepts of management.
  (A) Coordination and efficiency
  - (B) Efficiency and Effectiveness
  - (C)Planning and Effectiveness
  - (D) None of these
- 43. Ritu is the manager of the Northern division of a large corporate house. At what level does she work in the organisation?
  - (A) Top Level
  - (B) Middle Level
  - (C) Lower Level
  - (D) None of these
- 44. \_\_\_\_\_\_, a function of management helps to minimize dishonest behavior on the part of employees by keeping a close check on their activities.
  - (A) Planning
  - (B) Directing
  - (C) Controlling
  - (D) None of these
- 45. Fashion Garments Ltd.'s target is to produce 1,000 shirts per month at a cost of Rs. 1,500 per shirt. The production manager could achieve this target at the cost of Rs. 1,600 per shirt as there was sudden increase in some of the direct expenses. The production manager of Fashion Garments Ltd. is \_\_\_\_\_
  - (A) Effective
  - (B) Efficient
  - (C) Effective and Efficient
  - (D) None of these

- 46. Dheeraj, an employee of Best Products Ltd. plays a very important role in the organisation. He performs various functions i.e., interacts with the actual workforce, looks after maintenance of safety standards and quality of output etc. Dheeraj is working as \_\_\_\_\_
  - (A) First Line manager
  - (B) Middle Level Manager
  - (C) Top Level Manager
  - (D) None of these
  - 47. Match the following:

Column A	Column B		
(i)Setting the Objectives	(a)Staffing		
(ii)Establishing Authority Relationships	(b)Coordination		
(iii)Finding the right people for the right job	(c)Planning		
(iv)Essence of Management	(d)Organising		

- (A) (i)-(c); (ii)-(b); (iii)-(a); (iv)-(d)
- (B) (i)-(a); (ii)-(b); (iii)-(c); (iv)-(d)
- (C) (i)-(a); (ii)-(b); (iii)-(d); (iv)-(c)
- (D) (i)-(c); (ii)-(d); (iii)-(a); (iv)-(b)
- 48. Tara Enterprises Limited is planning to increase its sales by 30% in the next quarter. Identify the feature of management being highlighted in the given statement.
  - (A) Management is all pervasive
  - (B) Management is a goal oriented process
  - (C) Management is a continuous process
  - (D) All the above
- Assertion: (A)Organisation is a collection of diverse individuals with different needs.
   Reason : (R)Each member of the organisation may have different individual goals but they must travel together towards common goals.
  - (a) Both (A) and (R) are correct
  - (b) (A) is correct (R) is incorrect
  - ( c ) Both (A) and ( R) are correct, and R is the correct explanation of A
  - (d) Both (A) and (R) are correct, and R is not the correct explanation of A
  - 50. Hayaram is a famous chain, selling a large variety of products in the Indian Market. Their products include chips, biscuits, sweets and squashes. It charges a comparatively higher price than its competitors and sells quality products. Besides, it offers regular discounts to its customers and easy credit terms to its retailers.

The above paragraph describes the combination of variable(s) used by Hayaram to prepare its market offering. Identify the variable(s) of market offering from the following:

- (a) Product
- (b) Price
- (c) Promotion
- (d) All of these
- 51. Crackers Ltd., a fire- cracker manufacturing company, launched some new products on the eve of Diwali which attracted many buyers. The company was in a hurry to maximise the production to meet the increased demand and ignored to mention appropriate safety warnings for use on the packets that led to many accidents.

Identify the important product related decision that was not taken into consideration by the company.

- (a) Branding
- (b) Labelling
- (c) Packaging
- (d) None of these

52.



The above picture is an example of which part/parts of a Brand, given below:

- (a) Brand Name
- (b) Brand Mark
- (c) (c) Brand Name & Brand Mark
- (d) (d) None of these
- 53. 'Delicious' a popular brand chocolate manufacturing company captures 12% market share by offering its unique varieties of chocolates targeting customers of all age groups. Keeping in mind its increasing demand throughout the country, it adopted two different channels of distribution as follows:
  - (i) Manufacturing >> C&F Agent >> Distributor >> Retailer >> Customer

(ii) Manufacturing >> Bulk Buyers >> Customer

Identify the type of channel of distribution followed by 'Delicious' Chocolate company from the following:

- (a) Direct/Zero level Channel
- (b) Indirect channel
- (c) Both (a) and (b) above

(d) Neither (a) nor (b)

Read the following text and answer question No.54-57 on the basis of the same:

Yamuna Prasad, a small shopkeeper in Bikaner, Rajasthan used to sell the famous'Bhujia-Sev'. It was a quick selling product for locals and foreign tourists. His secondgeneration expanded the business and got 'Yamuna KiBhujia' registered with concernedauthorities. Gradually the brand offered a wide range of products to its customers likenamkeen, sweets, bakery items etc. However, 'Bhujia-Sev' remained the most popularproduct of the brand creating maximum revenue. 'Yamuna KiBhujia' offered its products at competitive prices even while offeringcustomer services like gift packaging and free home delivery to become a householdname. Now it has virtually become a synonym for bhujia-sev in the market, so much so, that people ask for 'Yamuna KiBhujia' instead of bhujia-sev. 'Yamuna KiBhujia' hasdeveloped a strong distribution network in India and abroad by setting up retail outlets andreaching out to the customer through internet selling.Promotion of the brand had always been low profile, till the increase in competitionpushed it to hire the services of a professional advertising agency, VIGYAPAN PVT.LTDfor promoting the product. On the advice of VIGYAPAN PVT.LTD, 'Yamuna KiBhujia'has also worked upon managing public opinion by developing relations with the massesthrough sponsoring cultural and sporting events, maintenance of public parks etc.

54. 'His second generation expanded the business and got 'Yamuna KiBhujia' registered with

concerned authorities.'With reference to the given text 'Yamuna kiBhujia' is a \_\_\_\_\_\_ giving it a legal protection against its use by anyone else.

- A. Brand value
- B. Trademark
- C. Trait mark
- D. Brand mark
- 55. 'Yamuna KiBhujia' offered its products at competitive prices even while offering customer services like gift packaging and free home delivery to become a household name.Identify the factor affecting the element of marketing mix being discussed above.
  - A. Marketing methods used
  - **B.** Objectives
  - C. Extent of competition in the market
  - D. product cost
- 56. 'Yamuna KiBhujia' has developed a strong distribution network in India and abroad by setting up retail outlets and reaching out to the customer through internet selling. Identify the decision related to the element of marketing mix being discussed above.
  - A. Storing and assorting products in order to create time utility
  - B. Regarding the channels or using intermediaries
  - C. Both a & b

57.

- D. One regarding branding, packaging and labelling
- On the advice of VIGYAPAN PVT.LTD, 'Yamuna KiBhujia' has also worked

upon managingpublic opinion by developing relation with the masses through sponsoring cultural andsporting events, maintenance of public parks etc. Name the department in theorganisation which is generally responsible for performing the above important task of managing public opinion.

- A. Marketing Department
- B. A separate department created in the firm for the purpose
- C. An outside agency
- D. Any of the above.
- 58. Zolo, a marketer of cars having 40 % of the current market share of the country aims at increasing the market share to 70% in next few years. For achieving this objective the manager of the company specified the action programme covering various aspects. Identify the function of marketing discussed above:
  - (a) Customer support services
  - (b) Gathering and Analysing market information
  - (c) Product designing and development
  - (d) Marketing Planning
- 59. Style and Fit, a footwear manufacturing company has decided to offer 50 % off on all its products due to the fall in demand of its products as more efficient substitutes have been introduced in the market. Identify the pricing objective included by the firm which has made the firm resort to discounting its product.
  - (a) Obtaining market share leadership
  - (b) Surviving in the competitive market
  - (c) Attaining product quality leadership
  - (d) Protect the interest of public
- 60. Style and Fit, a footwear manufacturing company has decided to offer 50 % off on all its products due to the fall in demand of its products as more efficient substitutes have been introduced in the market. Identify the pricing objective included by the firm
which has made the firm resort to discounting its product.

- (a) Obtaining market share leadership
- (b) Surviving in the competitive market
- (c) Attaining product quality leadership
- (d) Protect the interest of public

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### Section A

**Multiple Choice Questions** 

- 1 The sociological perspective on race.
- (a) begins with the assumption that races are based
- on easily classified differences
- (b) considers race a social construct, not an absolute
- (c) Neither (a) nor (b)
- (d) Both (a) and (b)
- 2 Which of the following is true regarding
- discrimination?
- (a) In order for a person to discriminate, he or she must hold prejudicial attitudes
- (b) Discrimination is an action.
- (c) Discrimination is not a form of racism.
- (d) None of the above
- 3 Social inequality and exclusion are social

because they are about.

- (a) individual
- (b) group
- (c) world
- (d) Both (a) and (b)
- 4 Social inequality and exclusion are
- (a) structured
- (b) systematic
- (c) unorganised
- (d) Both (a) and (b)

5 Which of the following is the form of capital of social resources?

- (a) Economic capital
- (b) Cultural capital (d) All of these
- (c) Social capital
- (d) All of these

6 These social resources can be divided into three forms of capital - economic capital in the form of material assets and income; cultural capital such as educational qualifications and status; and...... in the form of networks of contacts and social associations.

- (a) political capital
- (b) financial capital
- (c) social capital
- (d) None of these

7 Patterns of unequal access to social resources are commonly called...... Some social inequality reflects innate differences between individuals. For example, their varying abilities and efforts

- (a) political inequality
- (b) social inequality
- (c) cultural inequality
- (d) social equality

8 Sociologists use the term system by which categories of people in a society are ranked in a hierarchy This hierarch then shapes people's identity and experiences, their relations with others, as well as their access to resources and opportunities.

- (a) social gratification
- (b) social stratification
- (c) political hierarchy
- (d) social equality

9 Social stratification persists over generations The ascribed aspect of social inequality is reinforced by the practice of That is, marriage is usually restricted to members of the same caste, ruling out the potential for blurring caste lines through inter-marriage.

(a) polygamy

(b) exogamy

(c) endogamy

(d) None of these

Fill In The Blanks

10 In addition to political justice, the Indian Constitution also seeks to ensure two other kinds of justice. These are------ and ------

11----- is an attitude of aversion and hostility

towards the members of a group simply

because they belong it.

12 The co-existence of diverse groups are called ------

13 -----were believed to be 'people of forest'.

Complete the Statements

14 The third gender of the person is based on .....

15 Sociologists used the term political stratification to refer to a system by which .....

### Section **B**

Multiple Choice Question

1 Which of the following notions reflects class and caste prejudices?

- (a) Stereotype
- (b) Discrimination
- (c) Prejudices
- (d) All of these

2 The conversions of gender status of body into opposite gender by using choice or certain compulsion is known as .....

- (a) transgender
- (b) third Gender
- (c) Both (a) and (b)
- (d) None of these

3 Which of the following is the main dimension of untouchability?

- (a) Exclusion
- (b) Exploitation
- (c) Humiliation-Subordination
- (d) None of these

4 Power whose basis is the threat or application of punishment is called

- (a) charismatic authority
- (b) traditional authority
- (c) authority
- (d) force

5 States try to establish and enhance legitimacy through

- (a) Nation Building Strategy
- (b) Communist Strategy
- (c) Imperial Strategy
- (d) Singular National Identity

6 How many languages are recognised officially in 8th Schedule of Constitution?

- (a) Eighteen
- (b) Ten
- (c) Eleven
- (d) Fifteen

7 The process involves a continuous dialogue, negotiation and even struggle against significant others like our parents, family, kin group and our community. Our community provides us the language and the cultural values through which we comprehend the world. It also anchors our self-identity.

- (a) socialisation
- (b) Privatisation
- (c) liberalisation
- (d) Constitutional

8 Activities which are determined by the accidents of birth and do not involve any choice on the part of the individuals concerned are known as

- (a) descriptive
- (b) subjective
- (c) ascriptive
- (d) None of these

9 Finance Commission which is set up every...... years to decide on sharing of tax revenues between Centre and States. Each Five-Year Plan also involves detailed State Plans prepared by the State Planning Commissions of each state.

- (a) five
- (b) seven
- (c) ten
- (d) nine
- 10 Which of the following is true about state?
- (a) State is an abstract entity.
- (b) State consists of a set of political-legal institutions.
- (c) State claims a control over the particular territory and the people living in.
- (d) All of the above

11 The old Bombay state was a multilingual state of which languages?

- (a) Marathi and Gujarati
- (b) Kannada and Konkani
- (c) Telugu and Malayalam
- (d) Both (a) and (b)
- Fill In The Blanks
- 12 The term Harijan was popularised by .....
- 13The....., a radical group emerged in Western India during 1970s.
- 14 The government monopoly over forests is the major issue for.....

15 In..... authority, rules are obeyed because their commands are within the impersonal, formally defined scope of their office.

16 ...... is the political process that has to do with the authoritative formulation of policies that are binding and pervasive throughout society.

17 Diversity emphasises .....rather than inequalities.

18..... refers to the preconceived idea about an individual or groups.

19 India has a population of about..... billion people according to census, 2011.

20 India has about 80.5% of the population of ..... in terms of religion.

21 The characteristic feature of modern era is that democracy and..... are dominant source of political legitimacy.

Complete the Sentences

22 States generally tend to favour a single, homogenous national identity in ....

23 In terms of the nation-state's relationship with community identities, the Indian case fits....

24 Regionalism in India is rooted in India's....

# DELHI PUBLIC SCHOOL SAIL TOWNSHIP DHURWA RANCHI

## SAMPLE PAPER-III

# **SUBJECT: - PHYSICAL EDUCATION (048)**

Time: 1:30 hrs.

Maximum Marks: 35

#### **General Instructions:**

1. There are three sections in the Question paper namely Section A, Section B and Section C.

2. Section A consists of 24 questions amongst which 20 questions have to be attempted.

3. Section B consists of 24 questions amongst which 20 questions have to be attempted.

4. Section C consists of 12 questions amongst which 10 questions have to be attempted.

5. All questions carry equal marks.

### <u>SECTION – A</u>

1. Through Planning we can:

(a) Reduce risks of uncertainty (b) Provide proper direction

(c) Reduce wastage of time (d) All of the above

2. Training session is a part of:

(a) An Art (b) A Science

(c) Both A and B (d) None of these

3. "Round Robin" is also called as:

(a) Knock out tournament

(b) Ladder tournament

(c) League tournament

(d) None of the above

4. Formula for calculating number of matches in a knockout tournament:

(a) *n* (*n* – 1)

(b) *n* – 1

(c) *n* + 1

(d) *n* – 2

5. Fats and oils come under:(a) Protective or regulatory foods (b) Energy giving foods(c) Bodybuilder group (d) Routine foods

6. Which of the following is not a Macro nutrient?(a) Fats (b) Carbohydrates(c) Proteins (d) Minerals

7. Which one of the following is a macro mineral? (a) Iodine (b) Iron (c) Copper (d) Calcium

8. What is the term used for inability of digestive system to digest and absorb individual elements of food?

(a) Food intolerance (b) Food allergy

(c) Food poisoning (d) None of the above

9. What is an ideal weight to be reduced in one week?
(a) 250 gms to 500 gms (b) 500 gms to 1 kg
(c) 1 kg to 1.5 kg (d) 1 kg to 2 kgs

10. In children, Motor development refers to :

(a) good posture

(b) development of bones & muscles and ability to move around

(c) development of disorder

(d) development of leadership skills

11. Which of the following should not be a part of a child's daily activity?

(a) Running in the parks (b) Walking to a friend's home

(c) Climbing on a frame (d) Watching TV for long hours

12. Deformity of the legs is known as

(a) Scoliosis (b) Lordosis

(c) Knock knees (d) Kyphosis

13. Which of the following tests is best to measure speed and agility?

(a) Cooper's 12-minute run and walk test

(b) 1500m race

(c) Half Marathon race

(d) 4×10 m Shuttle run

14. Which of the following statements is true about proteins?

(a) Proteins are made up of amino acids

(b) Proteins are essential for the development of skin, teeth and bones

(c) Protein helps in building, repairing and maintaining body tissues

(d) All of the above

15. The test duration for the Harvard fitness test is :

(a) 3 minutes (b) 4 minutes

(c) 5 minutes (d) 6 minutes

16. Formula used for Fitness Index (long term) in Harvard Step Test is :

(a) Test duration in minutes 100/2 ×3 pulse counts after exercise

(b) Test duration in seconds/2 ×2 pulse counts after exercise

(c) 300× Test duration in seconds/2 ×2 pulse counts after exercise

(d) 100×Test duration in seconds /2 ×3 heart beats in the recovery

17. Which test item is used to measure Lower Body Flexibility?

(a) Chair Stand Test (b) Arm Curl Test

(c) Chair Sit & Reach Test (d) Six Minute Walk Test

**18.** If you want to measure Aerobic Endurance of a senior citizen, which test would you use :

(a) Eight Foot Up & Go Test (b) Six Minute Walk Test

(c) Back-Scratch Test (d) Chair Stand Test

19. Sports biomechanics can be described as :

(a) mechanics of sports (b) kinesiology

(c) physics of sports (d) sports dynamics

20. The study of forces & their effects on living systems is called:

(a) Biochemistry (b) Anatomy

(c) Biomechanics (d) None of the above

21. Bringing closer to the reference axis is called:

(a) Flexion (b) Extension

(c) Abduction (d) Adduction

22. During Adduction the arm moves:

(a) Towards the body (b) away from the body

(c) In front of the chest (d) None of these

23. Newton's first law of motion is also called :

(a) Law of inertia (b) Law of Acceleration

(c) Law of action and reaction (d) None of the above

24. According to Newton's Second Law of Motion, greater the momentum imparted to an object:

(a) More will be its acceleration (b) Lesser will it resist the external forces acting on it

(c) Lesser will be its acceleration (d) None of the above

### <u>SECTION – B</u>

25. Which formula is used to determine the number of byes to be given in each half in case of eventeams ?
(a) nb-1/2 (b) n(n - 1)
(c) nb/2 (d) 2nb

26. Carbohydrates contain elements of :

(a) Hydrogen and oxygen (b) carbon, hydrogen & oxygen

(c) carbon and oxygen (d) Nitrogen, carbon & oxygen

27. BMI between 25.0–29.9 is :

(a) underweight (b) normal

(c) overweight (d) obese

28. Scoliosis is a postural deformity related to (a) Muscles (b) Shoulders

(c) Legs (d) Spine

29. Partial curl up test is used to measure :(a) the explosive power of legs (b) agility and speed(c) abdominal muscular strength (d) none of the above

30. What is the weight of dumbbell for men in arm curl of Rikli and Jones Test ?

(a) 5 pounds (b) 6 pounds

(c) 8 pounds (d) 10 pounds

31. During abduction the arm moves—

(a) Towards the body (b) Away from the body

(c) In front of the chest (d) None of the above

**32.** Acceleration due to an external force acting on a moving object is technically defined as change in ...... of the object:

(a) location (b) direction

(c) velocity (d) movement

**33.** Match the following :

(a) 1st bye is always given to (i) 1st team of the upper half

(b) 2nd bye is always given to (ii) 1st team of the lower half

(c) 3rd bye is always given to (iii) Last team of the lower half

(d) 4th bye is always given to (iv) Last team of the upper half

Choose the correct option :

(A) a-ii, b-iii, c-i, d-iv (B) a-iii, b-i, c-ii, d-iv

(C) a-ii, b-iii, c-iv, d-i (D) a-iv, b-iii, c-i, d-ii

34. Match List – I with List – II and select the correct option using the codes given below :

LIST - I				LIST - II				
(i)	Sunlight				Carbohydrates			
(ii)	Egg	 g			Fats			
(iii)	Butter	Butter			Protein			
(iv)	Bread			4.	Vitamin			
Code								
		(i)	(ii)		(iii)		(iv)	
(a)		2	4		3		1	
(b)		1	4		3		2	
(c)		2	1		4		3	
(d)		4	3		2		1	

LIST - I				LIST – II				
(i)	(i) Push Ups				Speed and agility			
(ii)	Standing Jump				For Boys			
(iii)	4 × 10 m Shuttle Run			3.	For Girls			
(iv)	Modified Push Ups			4.	Power of leg muscles			
Code								
		(i)	(ii)			(iii)		(iv)
(a)		2	4			1		3
(b)	o) 4 3				2		1	
(c)	-	1	2			4		3
(d)		3	1			2		4

#### 35. Match List – I with List – II and select the correct answer from the code given below :

36. Match List-I with List-II and select the correct answer using the code given below :

LIST - I				LIST – II			
(i)	Biomechanics			1.	Study of forces associated with		
					mo	tion	
(ii)	Kinetics			2.	Movement in which one surface		
					mo	vesor glides over a	another surface
(iii)	Major goal of biomechanics			3.	Forces related to body movements		
(iv)	Gliding movement			4.	Performance enhancement		
Code							
	(i	i)	(ii)			(iii)	(iv)
(a)	1		2			4	3
(b)	3		1			4	2
(c)	2		4			3	1
(d)	4		3			1	2

37. Which of the following food products are high in protein content?

(a) Cheese and eggs (b) Grains and legumes

(c) Milk and milk products (d) All of the above

38. Given below are two statements, one labelled as Assertion (A) and the other as Reason (R).

Assertion (A) : Balanced diet contains right amounts of various elements.

Reason (R) : We should have a diet which is rich in proteins but low in carbohydrates and fats.

19

In the context of above two statements which one of the followings is correct :

(a) Both (A) and (R) are true and (R) is the correct explanation of (A).

(b) Both (A) and (R) are true but (R) is not the correct explanation of (A).

(c) (A) is true but (R) is false.

(d) (A) is false but (R) is true.

39. Given below are two statements, one is labelled as Assertion (A) and other is labelled as

Reason (R).

Assertion (A) : An obese person has BMI more than 30.

Reason (R) : BMI indicates the flexibility of a person.

Find the correct answer from the following :

(a) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(b) Both (A) and (R) are true and (R) is the correct explanation of (A).

(c) (A) is true, but (R) is false.

(d) (A) is false, but (R) is true.

40. Given below are two statements, one labelled as Assertion (A) and the other as Reason (R).

Assertion (A) : Correct body posture is how a person holds his/her body.

Reason (R) : The body weight should be unequally distributed over both legs.

In the context of above two statements which one of the followings is correct :

(a) Both (A) and (R) are true and (R) is the correct explanation of (A).

(b) Both (A) and (R) are true but (R) is not the correct explanation of (A).

(c) (A) is true but (R) is false.

(d) (A) is false but (R) is true.

41. Given below are two statements labelled Assertion (A) and Reason (R).

Assertion (A) : There is a great need for test and measurement in sports and physical education.

Reason (R) : On the basis of measurement, an individual is selected for sports and physical activity programmes.

In the context of above two statements, which one of the following is correct ?

(a) Both (A) and (R) are true and (R) is the correct explanation of (A).

(b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(c) (A) is true, but (R) is false.

(d) (A) is false, but (R) is true.

42. Given below are two statements labelled Assertion (A) and Reason (R).

Assertion (A) : The purpose of Chair Stand Test is to measure the lower body strength. Reason (R) : This strength is required for maintaining balance so that the senior citizen does not

fall.

In the context of above two statements, which one of the following is correct ? (a) Both (A) and (R) are true and (R) is the correct explanation of (A).

(b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(c) (A) is true, but (R) is false.

(d) (A) is false, but (R) is true.

43. Given below are two statements labelled Assertion (A) and Reason (R).

Assertion (A) : The major goal of biomechanics in sports & physical exercise is to improve performance.

Reason (R) : By using biomechanics, we can use proper technique & equipment more effectively.

In the context of the above two statements, which one of the following is correct. (a) Both (A) and (R) are true and (R) is the correct explanation of (A). (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true.

44. Given below are two statements labelled Assertion (A) and Reason (R). Assertion (A) : Newton's laws can be applied to bigger bodies.

Reason (R) : During any kind of collision, the centre of mass of the system is not accelerated.

In the context of above two statements, which one of the following is correct?

(a) Both (A) and (R) are true and (R) is the correct explanation of (A).

(b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true.





(a) Knockout tournament (b) Ladder tournament

(c) Combination tournament (d) League tournament

46. Identify the type of deformity and choose its correct name :



(a) Scoliosis (b) Kyphosis

(c) Lordosis (d) None of these

47. The figure given below represents the ..... test.



(a) Standing Broad Jump (b) Harvard Step

(c) Zig Zag Run (d) None of these

48. Identify the following image:



- (a) Eversion
- (b) Inversion
- (c) Planter Flexion
- (d) Dorsi Flexion

## <u>SECTION – C</u>

49. A knockout tournament is being organised in which 16 teams are participating. The organisation committee has divided the responsibility to various subcommittees.

Based on this case study, answer the following questions:

What formula does the organising committee need to use to calculate the total number of teams in upper half ?

(a) n/2 (b) (n +1)/2 (c) (n-1)/2 (d) 2n

50. ABC School is one of the reputed schools in their location for the number of sports facilities itprovides to its stake holders. Keeping that in consideration CBSE Sports cell has given themthe responsibility of conducting CBSE Football cluster. 35 teams have sent their entry forparticipation in the tournament.

Total number of byes in the fixture will be ...... (a) 29 (b) 32 (c) 27 (d) 14

51. Carbohydrates is an essential macronutrient which provide energy for working of muscles, enables fat metabolism and prevents protein being used as energy and thus is an important source of energy.

Based on this case, answer the following question:

Carbohydrates contain elements of :

(a) Hydrogen and oxygen(b) Carbon, hydrogen & oxygen(c) Carbon and oxygen

(d) Nitrogen, carbon & oxygen

52. Naman was a Class 12th student. He used to bring junk-food in his lunch-box daily. His teacherobserved that he was becoming overweight, he was neither concentrating on his studies noractively participating in physical activities. In this matter, he had a talk with his parents andcame to know that he refuses to eat roti, dal, fruits and vegetables. Due to this he is facingthese problems. Based on the above passage, answer the following question:

Why should junk-food not be recommended?

(a) Because it is full of proteins

- (b) Because it is full of vitamins
- (c) Because it is full of minerals
- (d) Because it does not contain the required nutrients

53. Anita was facing the problem of Kyphosis. Due to this, she was under stress and tension. Oneday, her Physical Education teacher came to know about the problem. She also advised Anitasome corrective exercises to minimize the deformity of Kyphosis. After few months of regularexercise, she was confident enough to get rid of Kyphosis. Kyphosis is a problem related to

(a) heart (b) spine

(c) brain (d) legs

54. In the 1870s, an epidemic struck Indonesia. The disease was familiar to people in east Asia;Indonesians knew it as beriberi, from the word "beri" which means "weak," and it had beenan occasional problem in the region for thousands of years. But suddenly it became one of the most common diseases in east Asia. It started with the weakness and fatigue that gave23the disease its name, but patients also grew restless and irritable. Their stomachs hurt, and they didn't want to eat. Then their limbs began to tingle and burn, or sometimes went numb.

Deficiency of which vitamin is the cause of Beriberi ?

(a) Vitamin B1 (b) Vitamin B2

(c) Vitamin B3 (d) Vitamin B12

55. The sports Minister, has launched many sports schemes in India. One of the best schemes isKhelo India. The father of one of the students approached the physical education teacherand asked him about their fitness level. The physical education teacher replied that KheloIndia consisted of physical fitness tests for school children and they were analysing students' fitness through these tests.

Which of the following tests is the best to measure Lower body flexibility?

(a) Harvard Step Test (b) Sit and Reach Test

(c) Barrow Fitness Test (d) General Fitness Test

56. Vitamin A deficiency causes night blindness and has been estimated to cause 500,000 cases of blindness in children worldwide. It also weakens our defences against infections, leading to 700,000 deaths.

What is the other name of vitamin A ?

(a) Thiamine (b) Niacin

### (c) Riboflavin (d) Retinol

57. While organizing sports events for the Annual Sports Day, Sahil and Ravi being the captain

and vice-captain of sports, formed various committees as shown below.



The members of this committee are responsible for welcoming guests and spectators :

- (a) Decoration committee (b) Reception committee
- (c) Publicity committee (d) Transportation committee

58. Below given is the pie chart of Nutrients and their percentage in diet :



Based on above data answer the following question : Which nutrient is called building block of body ? (a) Carbohydrates (b) Proteins

(c) Fats (d) Vitamins & Minerals

59. Posture plays a very significant role in our daily activities. Correct posture means the balancing of body in accurate and proper manner. Various types of postural deformities can be identified in individuals.



The person in the middle is suffering with :

- (a) Bow legs (b) Flatfoot
- (c) Knock knees (d) Elephant foot

60. Look at the pictures given below and answer the following question :



Both the tests shown in the picture are conducted to check ...... fitness. (a) Cardiovascular (b) Respiratory

(c) Muscular (d) Skeletal