

## Navik GD

Memory Based Paper (Section I + II) 22 March 2021

AND STANDARD OF THE STANDARD O



#### 110 Questions

Que. 1 The cost price of a teddy is Rs.1500 and it was sold for Rs.1230, find the loss %?

- 1. 20%
- 2. 15%
- 3. 18%
- 4. 21%

Correct Option - 3

Que. 2 A train of length 105 m crosses a man in 15 seconds, and crosses a platform in 35 seconds, Then what is the length of the platform?

- 1. 245 meter
- 2. 140 meter
- 3. 300 meter
- 4. 150 meter

Correct Option - 2

Que. 3 2.25 expressed as a percent of 15 is:

- 1. 20
- 2. 15
- 3. 18
- 4. 22

Correct Option - 2

Que. 4 Find the median of given data.

{13, 2, 5, 18, 6, 3, 6, 7, 8, 11, 17}

- 1. 6
- 2. 6.5
- 3. 7
- 4. 8

Correct Option - 3

Que. 5 Calculate the volume of sphere with diameter 42 cm.

- 1. 48007 cu cm
- 2. 42963 cu cm
- 3. 38808 cu cm
- 4. 28660 cu cm

Correct Option - 3

Que. 6 The ratio of three numbers is 2 : 3 : 4. The sum of these numbers is 108. What is the largest number?

- 1. 48
- 2. 46

3. 56

4. 42

#### Correct Option - 1

Que. 7 If A is 80% of B, what percent of A is B?

1. 125

2. 130

3. 122

4. 132

Correct Option - 1

Que. 8 If  $11\sqrt{n} = \sqrt{112 + \sqrt{343}}$  then the value of n is:

1. 11

2. 13

3. 7

4. 3

Correct Option - 3

Que. 9 The speed of car A is two times of car B's speed. If car A covers a distance of 154 kilometers in 2 hours and 45 minutes then find the speed of the car B.

1. 42 km/hr

2. 28 km/hr

3. 27 km/hr

4. 21 km/hr

Correct Option - 2

Que. 10 If x + 1/x = 3, then find the value of  $x^6 + 1/x^6$ .

1. 365

2. 364

3. 322

4. 343

Correct Option - 3

**Que. 11** If  $\sin(3A) = \cos(70^{\circ} - A)$ , then find the value of A?

1. 8°

2. 5°

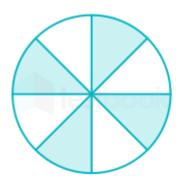
3. 7°

4. 10°

Correct Option - 4

**Que. 12** Find the area of the shaded region if the radius of the circle is 14 cm.





- 1.  $300 \text{ cm}^2$
- $2. \quad 304 \text{ cm}^2$
- $3. \quad 308 \text{ cm}^2$
- 4.  $312 \text{ cm}^2$

Que. 13 The ratio of the angles in a quadrilateral are in ratio 2:6:4:8. Find the value of the smallest angle.

- 1. 54°
- 2. 36°
- 3. 18°
- 4. 24°

Correct Option - 2

Que. 14 A sum of money amounts to Rs. 24000 in 2 years and Rs. 30000 in 5 years at simple interest, find the rate of interest.

- 1. 50/3%
- 2. 10%
- 3. 20%
- 4. 5%

Correct Option - 2

Que. 15 The LCM of two numbers is 25 times their HCF. The product of the two numbers is 2025. Find the HCF.

- 1. 81
- 2. 45
- 3. 9
- 4. 18

Correct Option - 3

**Que. 16** Find the value of  $(\sin 78^{\circ}/\cos 12^{\circ})$  -  $(\sin 63^{\circ}/\cos 27^{\circ})$  +  $3(\cos^2 69^{\circ} + \cos^2 21^{\circ})$ 

- 1. 4
- 2. 3
- 3. 5
- 4. 6



Que. 17 3 men and 4 women can complete the work in 10 days. 24 men and 2 women can complete FRESHERS NOW work in 2 days. What is time taken by 11 men and 3 women to complete it?

- 1. 2 days
- 2. 4 days
- 3. 8 days
- 4. 16 days

Correct Option - 2

Que. 18 Nitin purchases 4 seed bag at the same price. He sell two seed bags at 10% profit, one at 6% loss and the last one at 10% loss then find net profit or loss%.

- 1. 1% loss
- 2. 5% profit
- 3. 1% profit
- 4. 5% loss

Correct Option - 3

Que. 19 A bag contains Rs 110 in the form of Rs.1, 50 paise, and 25 paise coins. The ratio of the number of coins is 1:2:3. Find out the number of coins of 50 paise.

- 1. 80
- 2. 60
- 3. 30
- 4. 90

Correct Option - 1

Que. 20 The average of 15 numbers is 22. If the 16<sup>th</sup> number is added into them the average becomes 25 then what is the 16<sup>th</sup> number?

- 1. 70
- 2. 48
- 3. 60
- 4. 54

Correct Option - 1

#### Que. 21 Select the correct passive form of the given sentence:

Had he touched my bag?

- 1. Had my bag touched by him?
- 2. Have my bag been touched by him?
- 3. Had my bag been touched by him?
- 4. Has my bag been touched by him?

Correct Option - 3

#### **Que. 22** Direction: Change the Voice -

Mona had cleaned the room.

- 1. The room had been cleaned by Mona.
- 2. The room have been cleaned by Mona.
- 3. The room had being cleaned by Mona.



4. The room has been cleaned by Mona.

Correct Option - 1

#### Que. 23 Direction: Change the Narration-

She said to me, "Will you come for the party?"

- 1. She asked whether I would come for the party.
- 2. She asked that she would come for the party.
- 3. She asked whether I will come for the party.
- 4. She asked that she will come for the party.

Correct Option - 1

### Que. 24 Direction: Which one of the following options correctly converts the sentence into indirect speech?

The boy said, "I completed reading this book yesterday."

- 1. The boy said that he had completed reading that book the previous day.
- 2. The boy said he had completed reading the book yesterday
- 3. The boy told that he completed reading the book yesterday
- 4. The boy completed reading the book the previous day.

Correct Option - 1

### Que. 25 <u>Direction</u>: Find out which part has an error and mark it as your answer. If there is no error, mark 'No error' as your answer.

My aunt can only crawl (A) / before the operation, (B) / but now she can walk and run. (C) / No error (D)

- 1. (A)
- 2. (B)
- 3. (C)
- 4. (D)

Correct Option - 1

<b>Que. 26</b>	Direction: Pick out the most appropriate word from the words given below each sentence to
	complete it meaningfully.

It has been raining \_\_\_\_\_ morning.

- 1. from
- 2. since
- 3. during
- 4. before

Correct Option - 2

#### Que. 27 Direction: Fill in the blank with the most appropriate phrasal verb.

Did you remember to the water and gas before you left the house?

- 1. put on
- 2. put off
- 3. shut off
- 4. drop off



Que. 28 Direction: Choose the most appropriate preposition and fill in the blank	Oue. 28
--	---------

I think my best friend is talking bad about me \_\_\_\_ my back.

- 1. across
- 2. over
- 3. in
- 4. behind

Correct Option - 4

#### Que. 29 Direction: Select the most appropriate word for the given group of words.

someone who is satisfied with life in general.

- 1. contented
- 2. cooperative
- 3. contentious
- 4. contemplative

Correct Option - 1

#### Que. 30 Direction: Select the word which means the same as the group of words given.

A person who thinks he/she is the best.

- 1. Eccentric
- 2. Egoist
- 3. Selfish
- 4. Garrulous

Correct Option - 2

#### Que. 31 Direction: Choose the correct meaning of the following phrase/idiom.

Show off

- 1. Break
- 2. Flaunt
- 3. Boost
- 4. Increase

Correct Option - 2

#### Que. 32 <u>Direction</u>: Find the correct synonym of the following word.

Lucid

- 1. quick
- 2. correct
- 3. understandable
- 4. aback

Correct Option - 3

#### Que. 33 Direction: Select the most appropriate synonym of the given word.

**MASQUERADED** 

- 1. Dropped
- 2. Acted



- 3. Managed
- 4. Disappeared

#### Que. 34 | Select the most appropriate ANTONYM of the given word.

CONCEALED

- 1. Hidden
- 2. Masked
- 3. Revealed
- 4. Discussed

Correct Option - 3

#### Que. 35 Directions: Select the most appropriate ANTONYM of the given word

**IMPROMPTU** 

- 1. Planned
- 2. Fast
- 3. Appropriate
- 4. Unplanned

Correct Option - 1

#### **Que. 36** Jama Masjid of Delhi was built by?

- 1. Akbar
- 2. Humayun
- 3. Babar
- 4. Shah Jahan

Correct Option - 4

#### Que. 37 Who discovered the circulation of Blood?

- 1. Louis Braille
- 2. George East man
- 3. Robert Koch
- 4. William Harvey

Correct Option - 4

#### Que. 38 Who was the first Indian to win Nobel Prize?

- 1. Rabindranath Tagore
- 2. S S Bhatnagar
- 3. J. C. Bose
- 4. C.V. Raman

Correct Option - 1

#### Que. 39 The rearing of silkworms for obtaining silk is known as

- 1. Apiculture
- 2. Sericulture



- 3. Horticultrue
- 4. Silviculture

Que. 4	Which of the following countries will host the 2023 women's T-20 Cricket World Cup?			
1.	India			
2.	Bangladesh			
3.	3. Australia			
4.	4. South Africa			
Corre	et Option - 4			
Que. 4	Car moving on a straight road is an example ofmotion.			
1.	Rectilinear			
2.	Curvilinear			
3.	Random			
4.	Oscillatory			
Correc	et Option - 1			
Que. 4	Which of the following is the scientific name of Potato?			
1.	Daucas carota			
2.	Solanum tuberosum			
3.	Raphanus sativus			
4.	Solanum melongena			
Correc	et Option - 2			
Que. 4	Which disease is caused due to lack of vitamin D in the body?			
1.	Beriberi			
2.	Goiter			
3.	Scurvy			
4.	Rickets			
Correct Option - 4				
Que. 4	Which chemical is used to give green colour to firecrackers?			
1.	strontium carbonate			
2.	calcium chloride			
3.	sodium nitrate			
4.	4. barium chloride			
Correct Option - 4				
Que. 4	Physical quantity of is measured in watt.			
1.	kinetic energy			
2.	power			
3.	3. momentum			
4.	impulse			



Que.	46	Beriberi disease is due to the deficiency of vitamin
1.		C
2.	D	
3.	$B_1$	
4.	$B_5$	
Corr		Option - 3
		•
Que.	47	Which of the following SI unit is used for mass density?
1.		$kg/m^3$
2.	kø	$/\mathrm{m}^2$
3.		$/\mathrm{m}^{-3}$
4.	_	/m
		Option - 1
0011		
Que.	48	Gravitational force is maximum at which of the following places?
1.		At equator
2.	At	tropic of cancer
3.		tropic of capricorn
4.		poles
Corr		Option - 4
Que.	49	Which of the following is a vector quantity?
1.		Distance
2.	Sp	eed A
3.	W	ork
4.	W	eight
Corr	ect (	Option - 4
,		
Que.	50	A block of mass 20 kg is moving with velocity 10 m/s on a rough horizontal surface. Maximum
1	1 1	amount of heat that can be generated from this block is
1.	11	
<ul><li>2.</li><li>3.</li></ul>	21	
3. 4.		5 KJ eat cannot be generated from it
COII	(	Option - 1
Que.	51	Select the Venn diagram that best illustrates the relationship between the following classes.
Que.	31	Vegetable, Brinjal, Ladies finger
1		rogomole, Dinijui, Danies inigei



2.



3.



4.



Correct Option - 1

Que. 52 If CAMP is coded as 6217 and FIRE is coded as 8954, then what is the code of PREFACE?

- 1. 7582642
- 2. 7518261
- 3. 7548264
- 4. 7584268

Correct Option - 3

Que. 53 What will be the next figure in the series.



1.



2.



3.



4.



Correct Option - 3

Que. 54 John points out to a lady and says, "She is the mother of my son's wife's daughter." How is the relation of the lady with John?

1. Uncle



- 2. Nephew
- 3. Daughter-in-law
- 4. None of the above

Que. 55 In the following questions, a square sheet of paper is folded along the dotted lines, and then cuts are made on it. How would the sheet look when opened?



1.



2.



3.



4.



Correct Option - 1

**Que. 56** Find the odd pair of numerals:

- 1. 6:20
- 2. 11:35
- 3. 18:56
- 4. 8:24

Correct Option - 4

Que. 57 Select the option that is related to the third term on the same basis as the second term is related to the first term.

TUS: VWU:: FGE:?

- 1. HIG
- 2. JKI

- 3. KLM
- 4. NOM

Que. 58 If '+' means '×', '-' means ' $\div$ ', '×' means '-' and ' $\div$ ' means '+' then  $18 \times 9 \div 3 + 8 - 4 = ?$ 

- 1. 15
- 2. 3
- 3. 1
- 4. 9

Correct Option - 1

Que. 59 Identify the diagram that best represents the relationship among classes given below: Laptop, Mobile, Electronic device.

1.



2.



3.



4.



Correct Option - 3

Que. 60 P.V. Sindhu is related to badminton in the same way as Virat Kohli is related to:

- 1. Cricket
- 2. Basket ball
- 3. Football
- 4. Rukbey

Correct Option - 1

Que. 61 The energy radiated by a black body is directly proportional to

- 1. T<sup>2</sup>
- 2. T<sup>-2</sup>
- 3. T<sup>4</sup>
- 4. T



Que. 62 A charge Q is enclosed by a Gaussian spherical surface of radius R. If the radius is doubled the outward electric flux will

- 1. Be doubled
- 2. Increase four times
- 3. Be reduced to half
- 4. Remain the same

Correct Option - 4

Que. 63 The Young's modulus of a wire of length L and radius r is Y N/m<sup>2</sup>. If the length and radius are reduced to L/3 and r/4, then its Young's modulus will be

- 1. Y
- 2. Y/3
- 3. Y/4
- 4. Y/12

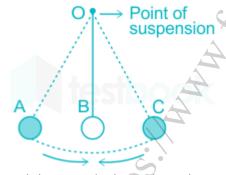
Correct Option - 1

**Que. 64** The acceleration due to gravity is

- 1. maximum at the centre of the earth
- 2. negative at the centre of the earth
- 3. positive at the centre of the earth
- 4. zero at the centre of the earth

Correct Option - 4

**Que. 65** Which of the following statement is CORRECT?



- 1. The Minimum Velocity and Maximum Acceleration will be at Point A only
- 2. The Minimum Velocity and Maximum Acceleration will be at Point A and C
- 3. The Maximum Velocity and Minimum Acceleration will be at Point A and B
- 4. The maximum Acceleration and Minimum Velocity will be at Point B only

Correct Option - 2

Que. 66 | Curie temperature is the temperature above which

- 1. A paramagnetic material becomes ferromagnetic
- 2. A ferromagnetic material becomes paramagnetic
- 3. A paramagnetic material becomes diamagnetic
- 4. A ferromagnetic material becomes diamagnetic

## Que. 67 The direction of electric field intensity (E) at a point on the equatorial line of an electric d freshers now dipole moment (p) is

- 1. along the equatorial line towards the dipole
- 2. along the equatorial line away from the dipole
- 3. perpendicular to the equatorial line and the opposite to p
- 4. perpendicular to the equatorial line and parallel to p along the axial line in the direction of p

Correct Option - 3

Que. 68 The terminal velocity of a copper ball of radius 2 mm falling through a tank of honey is 30 mm/s. What will be the drag force exerted by the oil on the copper ball if the viscosity of the oil is 1 N- $s/m^2$ .

- 1.  $1.13 \times 10^{-3} \text{ N}$
- 2.  $1.13 \times 10^{-6} \text{ N}$
- 3.  $36 \times 10^{-4} \text{ N}$
- 4.  $36 \times 10^{-6} \text{ N}$

Correct Option - 1

Que. 69 An object of mass m follows a circular path of radius r with a constant speed v in uniform circular motion. Then, the work done by the centripetal force for the object to move once in a full circle is

- 1.  $(MV^2/r).2r$
- 2. Zero
- 3.  $(Mv^2/r).2\pi r$
- 4.  $(MV^2/r).2\pi r$

Correct Option - 2

Que. 70 An observer is moving towards a stationary source of frequency 250 Hz with a velocity of 40 m/s. If the velocity of sound is 330 m/s, the apparent frequency heard by the observer will be:

- 1. 320 Hz
- 2. 300 Hz
- 3. 280 Hz
- 4. None of these

Correct Option - 3

Que. 71 What is the dimensional formula of strain?

- $1. \qquad M^0L^0T^0$
- 2.  $M^1L^{-1}T^{-2}$
- 3.  $M^0L^0T^{-1}$
- 4. None of the above

Correct Option - 1

Que. 72 What will be the photon energy in Joule if it has wavelength 2000 Å?

- 1.  $4.97 \times 10^{-19} \,\mathrm{J}$
- 2.  $2.48 \times 10^{-19} \text{ J}$
- 3.  $5.28 \times 10^{-19} \,\mathrm{J}$
- 4.  $9.94 \times 10^{-19} \,\mathrm{J}$



Que.	. 73	An ideal gas heat engine is operating at Carnot cycle between 200°C and 125°C. If it absorbs 1000 J of heat at 200°C, the amount of heat converted into work is-
1.	16	0 J
2.	32	5 J
3.	56	$0~\mathrm{J}$
4.	45	4 J
Con	rect (	Option - 1
Que.	. 74	Candela is unit of
1.		acoustic intensity
2.	ele	ectric intensity
3.	m	agnetic intensity
4.	lu	minous intensity
Corr	rect (	Option - 4
Que.	. 75	What is the coefficient of restitution for a perfectly elastic collision?
1.		
2.	1	
3.	$\infty$	
4.	be	tween 0 and 1
Cor	rect (	Option - 2
Que.	76	Water flows into a pipe of diameter 7 cm at 20 km/hr and exits through 'n' number of holes each of diameter 1 cm from the other end at 70 km/hr. Find 'n'.
1.	14	
2.	7	
3.	21	
4.	28	
Corr	rect (	Option - 1
Que.	. 77	Choose the correct statement about P-type and N-type semiconductor.
1.		P-type is intrinsic and N-type is extrinsic semiconductor.
2.	M	ajority charge carrier of P-type is electrons and that of N-type is holes.
3.		hen trivalent impurity is added in intrinsic then P-type is formed and when pentavalent is added

- 3. When trivalent impurity is added in intrinsic then P-type is formed and when pentavalent is added then N-type is formed.
- 4. All are correct.

Que. 78 A particle of mass m is moving along a circle of radius R with a velocity  $v = 2t^3$ . Find the tangential acceleration of the particle at time (t) = 2 sec?

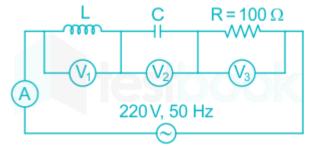
- 1.  $20 \text{ m/s}^2$
- 2.  $24 \text{ m/s}^2$
- 3.  $16 \text{ m/s}^2$

# FRESHERS NOW

4.  $32 \text{ m/s}^2$ 

#### Correct Option - 2

Que. 79 In the given circuit the reading of voltmeter  $V_1$  and  $V_2$  are 300 volts each. The reading of the voltmeter  $V_3$  and ammeter A are respectively



- 1. 100 V, 2.0 A
- 2. 150 V, 2.2 A
- 3. 220 V, 2.2 A
- 4. 220 V, 2.0 A

Correct Option - 3

Que. 80 Two similar cubes A and B contains a charge q and 2q respectively, then the ratio of the flux associated with the cube A to the cube B will be:

- 1. 1:2
- 2. 2:1
- 3. 1:1
- 4. None of these

Correct Option - 1

Que. 81 Consider the following statements:

- a) Photon exerts no pressure.
- b) Rest mass of the photon is zero
- c) Energy of photon is hv

Which of the following statements are correct?

- 1. Both a and b
- 2. Both b and c
- 3. Both a and c
- 4. All are correct

Correct Option - 2

Que. 82 In Young's double slit experiment, the slits are separated by 0.28 mm and the screen is placed 1.4 m away. The distance between the fourth bright fringe and the central bright fringe is measured to be 1.2 cm. Calculate wavelength of light used in this experiment.

- 1. 350 nm
- 2. 700 nm
- 3. 600 nm
- 4. 500 nm

#### **Que. 83**

A thin ring of mass 5 kg and diameter 20 cm is rotating about its axis at 4200 rpm. Find its momentum (in kgm<sup>2</sup>/s)?

- 1. 44
- 2. 11
- 3. 22
- 4. 33

Correct Option - 3

Que. 84 Find the magnification of the convex lens, if an object is placed 30 cm from a convex lens which has a focal length of 15 cm.

- 1. +1
- 2. +0.5
- 3. -0.5
- 4. -1

Correct Option - 4

Que. 85 If a wire in the circuit is replaced with a wire of resistivity four times and the length and cross-sectional area is the same. Then the current in the circuit will become:

- 1. One fourth
- 2. Four times
- 3. Half
- 4. Double

Correct Option - 1

**Que. 86** Evaluate the integral  $\int_0^{\frac{\pi}{2}} \frac{1}{1 + \tan x} dx$ 

- 1.  $\frac{7}{4}$
- $2. \frac{\pi}{2}$
- 3.  $\frac{\pi}{6}$
- 4. None of the above

Correct Option - 1

**Que. 87** The domain of the function  $f(x) = \frac{1}{\sqrt{|x|-x}}$  is

- 1.  $[0, \infty)$
- 2.  $(-\infty, 0)$
- $3. \quad [1, \infty)$
- 4.  $(-\infty, 0]$

Correct Option - 2

Que. 88 If  $|\vec{a}| = 3$ ,  $|\vec{b}| = 4$  and  $\vec{a} \cdot \vec{b} = 6$ , then find the value of  $|\vec{a} \times \vec{b}|$ 

- 1.  $\sqrt{3}$
- 2.  $8\sqrt{3}$
- 3.  $6\sqrt{3}$
- 4.  $4\sqrt{3}$

**Que. 89** Calculate the area under the curve  $y = 2\sqrt{x}$  and included between the lines x = 0, x = 4

- 1. 32/5
- 2. 32/3
- 3. 31/2
- 4. 3/2

Correct Option - 2

Que. 90 If the lines  $\frac{x-2}{1} = \frac{y-4}{4} = \frac{z-6}{7}$  and  $\frac{x+1}{3} = \frac{y+3}{5} = \frac{z+5}{\lambda}$  are coplanar then find the value of  $\lambda$ ?

- 1.
- 2. 5
- 3. 4
- 4. 8

Correct Option - 1

Que. 91 If  $y = e^{x + e^{x + e^{x + \dots \infty}}}$ , then  $\frac{dy}{dx}$  is:

- 1.  $\underbrace{1+y}_{zz}$
- $2. \quad \frac{y}{1+y}$
- $3. \quad \frac{y}{1-y}$
- 4.  $\frac{1-y}{y}$

Correct Option - 3

**Que. 92** The function  $f(x) = 1 + x^2 + x^4$  is strictly increasing for

- 1. x < 0
- 2.  $x \ge 0$
- 3. x > 0
- 4. None of these

Correct Option - 3

Que. 93 Find the values of k so the line  $\frac{x+4}{2} = \frac{4-y}{-2} = \frac{2z-4}{2k}$  and  $\frac{x+3}{-k} = \frac{y-3}{2} = \frac{z+1}{5}$  are at right angles.

- 1. 4/3
- 2. -4/3
- 3. -2/3
- 4. 2/3

Correct Option - 2

**Que. 94** What is the solution of the differential equation  $x \, dy - y \, dx = 0$ ?

- 1. xy = c
- 2. y = cx

4. 
$$x-y=c$$

**Que. 95** What is  $\cot A + \csc A$  equal to?

- 1.  $\tan\left(\frac{A}{2}\right)$
- $2 \cdot \cot\left(\frac{A}{2}\right)$
- $3. \quad 2\tan\left(\frac{A}{2}\right)$
- 4.  $2\cot\left(\frac{A}{2}\right)$

Correct Option - 2

Que. 96 Evaluate:  $\int \frac{x \cos^{-1} x}{\sqrt{1-x^2}} dx$ 

- 1.  $-x \sqrt{1 x^2} \cos^{-1} x + C$
- 2.  $x + \sqrt{1 x^2} \cos^{-1} x + C$
- 3.  $x \cos^{-1} x + C$
- 4. None of these.

Correct Option - 1

Que. 97 If the points (k, 2k); (3k, 3k) and (3, 1) are collinear, then the value of k is

- $-\frac{2}{3}$
- 2.  $-\frac{1}{3}$
- 3.  $\frac{4}{3}$
- 4.  $-\frac{4}{3}$

Correct Option - 2

**Que. 98** In what ratio is the line joining the points A (-1, 1) and B (5, 7) divided by the line x + y = 4?

- 1. 3:1
- 2. 1:2
- 3. 4:3
- 4. None of these

Correct Option - 2

**Que. 99** 
$$\sin^2 6x - \sin^2 4x =$$

- 1.  $\sin 2x \cos 10x$
- 2.  $\sin 2x \sin 8x$
- $3. \quad \sin 2x \sin 10x$
- 4.  $\cos 2x \cos 10x$

Que. 100

If 
$$\begin{bmatrix} 1 & -3 & 2 \\ 2 & -8 & 5 \\ 4 & 2 & \lambda \end{bmatrix}$$
 is not an invertible matrix, then what is the value of  $\lambda$ ?

- 1. -1
- 2. 0
- 3. 1
- 4. 2

Correct Option - 3

#### Que. 101 If A is a $2 \times 3$ matrix and AB is a $2 \times 5$ matrix, then B must be a

- 1.  $3 \times 5$  matrix
- 2.  $5 \times 3$  matrix
- 3.  $3 \times 2$  matrix
- 4.  $5 \times 4$  matrix

Correct Option - 1

Que. 102 If parabola  $y^2 = px$  passes through point (-2, 3), then the length of latus rectum is:

- 1. 18
- 2. 9
- 3. 4.5
- 4. 3

Correct Option - 3

Que. 103 Find the solution set for  $x \in R$  which satisfies both the inequation:  $2(3x - 4) - 2 < 4x - 2 \ge 2x - 4$  and 5x - 3 < 3x + 1.

- 1. [-1, 2)
- 2.  $[-\infty, 2)$
- [-1, 4)
- 4.  $[-\infty, 4)$

Correct Option - 1

**Que. 104** Find the 4<sup>th</sup> term from the last in the expansion of  $(\frac{x}{3} - 3y)^7$ .

- 1.  $108x^3y^4$
- 2.  $105x^3y^5$
- 3.  $105x^3y^4$
- 4.  $105x^2y^5$

Correct Option - 3

Que. 105 If the total number of observations is 20,  $\sum x_i = 1000$  and  $\sum x_i^2 = 84000$ , then what is the variance of the distribution?

- 1. 1500
- 2. 1600
- 3. 1700



Que. 106

The domain of  $\sin^{-1} 4x$  is:

- 1. [0, 1]
- 2. [-1, 1]
- 3.  $\left[-\frac{1}{4}, \frac{1}{4}\right]$
- 4. [-3, 3]

Correct Option - 3

Que. 107 In  $\triangle ABC$ ,  $\angle B = 90^{\circ}$ , AC = 169 cm, and BC = 120 cm. The length of AB (in cm) is

- 1. 109
- 2. 121
- 3. 119
- 4. 123

Correct Option - 3

Que. 108 If mean of the observations 25, 29, 25, 32, 24 and x is 27, then median of the observations is

- 1. 32
- 2. 27
- 3. 26
- 4. 25

Correct Option - 3

Que. 109 Find the coordinates of the focus of the parabola  $x^2 = 6y$ .

- 1.  $\left(-\frac{3}{2},0\right)$
- 2.  $(0, \frac{3}{2})$
- 3.  $\left(0, -\frac{3}{2}\right)$
- 4. None of these

Correct Option - 2

Que. 110 Find the center and the radius of the circle  $x^2 + y^2 - 12x - 18y - 27 = 0$ 

- 1. (6, 9) and 10
- 2. (6, -9) and 12
- 3. (6, -9) and 10
- 4. (6, 9) and 12