

**EXAM DATE : 1-September-2016 Morning Shift**

**Question 1.** A and B together can finish a work in 30 days. They worked for it for 20 days and then B left the work. The remaining work was done by A alone in 20 days more. In how many days can A alone finish the work?

- (A) 48 days
- (B) 50 days
- (C) 54 days
- (D) 60 days

**Question 2.** The centroid of an equilateral triangle ABC is G. If AB is 6 cms, the length of AG is

- (A)  $\sqrt{3}$  cm
- (B)  $2\sqrt{3}$  cm
- (C)  $3\sqrt{2}$  cm
- (D)  $2\sqrt{2}$  cm

**Question 3.** A merchant changed his trade discount from 25% to 15%. This would increase selling price by

- (A)  $3\frac{1}{3}\%$
- (B)  $6\frac{1}{6}\%$
- (C)  $13\frac{1}{3}\%$
- (D)  $16\frac{1}{3}\%$

**Question 4.** If 177 is divided into 3 parts in the ratio  $\frac{1}{2} : \frac{2}{3} : \frac{4}{5}$ , then the second part is

- (A) 75
- (B) 45
- (C) 72
- (D) 60

**Question 5.** If percentage of profit made, when an article is sold for Rs.78, is twice as when it is sold for Rs.69, the cost price of the article is

- (A) Rs. 49
- (B) Rs. 51
- (C) Rs. 57
- (D) Rs. 60

**Question 6.** The ratio between Ram's age and Rahim's age is 10:11. What is the age of Rahim in percentage of Ram's age

- A.  $109\frac{1}{11}\%$
- B. 110%
- C.  $111\frac{1}{9}\%$
- D. 111%

**Question 7.** Gautam travels 160 kms at 32 kmph and returns at 40 kmph. Then average speed is

- (A) 72 kmph
- (B) 71.11 kmph

- (C) 36 kmph
- (D) 35.55 kmph

**Question 8.** If  $x=3/2$ , then the value of  $27x^3-54x^2+36x-11$  is

- (A)  $11\frac{3}{8}$
- (B)  $11\frac{5}{8}$
- (C)  $12\frac{3}{8}$
- (D)  $12\frac{5}{8}$

**Question 9.** If  $a+b+c = 6$  and  $ab+bc+ca = 1$ , then the value of  $bc(b+c) + ca(c+a) + ab(a+b) + 3abc$  is

- (A) 33
- (B) 66
- (C) 55
- (D) 23

**Question 10.** If the angles of a triangle are in the ratio of 2:3:4, then the difference of the measure of greatest angle and smallest angle is

- (A)  $20^\circ$
- (B)  $30^\circ$
- (C)  $40^\circ$
- (D)  $50^\circ$

**Question 11.** In  $\Delta ABC$ ,  $\angle A = 90^\circ$ ,  $AD \perp BC$  and  $AD = BD = 2$  cm. The length of CD is

- (A) 3 cm
- (B) 3.5 cm
- (C) 3.2 cm
- (D) 2 cm

**Question 12.**

If  $\tan 45^\circ = \cot \theta$ , then the value of  $\theta$ , in radians is

- (A)  $\pi$
- (B)  $\pi/9$
- (C)  $\pi/2$
- (D)  $\pi/12$

**Question 13.**  $(251 + 252+253+254+255)$  is divisible by

- (A) 23
- (B) 58
- (C) 124
- (D) 127

**Question 14.** The average of 12 numbers is 9. If each number is multiplied by 2 and added to 3, the average of the new set of numbers is

- (A) 9
- (B) 18

- (C) 21
- (D) 27

**Question 15.**

$$\text{If } \left(a + \frac{1}{a}\right)^2 = 3, \text{ then the value of } a^6 - \frac{1}{a^6} \text{ will be}$$

- (A) 1
- (B) 3
- (C) 0
- (D) 2

**Question 16.**

$$\text{If } \frac{\sqrt{2+x} + \sqrt{2-x}}{\sqrt{2+x} - \sqrt{2-x}} = 2, \text{ the value of } x \text{ is}$$

- (A) 4/5
- (B) 3/5
- (C) 8/5
- (D) 1/5

**Question 17.** The perimeter of two similar triangles ABC and PQR are 36 cms and 24 cms respectively. If PQ = 10 cm then the length of AB is

- (A) 18 cm
- (B) 12 cm
- (C) 15 cm
- (D) 30 cm

**Question 18.** In a triangle ABC, AB = 8 cm, AC = 10 cm and  $\angle B = 90^\circ$ , then the area of  $\Delta ABC$  is

- (A) 49 sq.cm
- (B) 36 sq.cm
- (C) 25 sq.cm
- (D) 24 sq.cm

**Question 19.**

$$\text{ABC is a triangle. If } \sin\left(\frac{A+B}{2}\right) = \frac{\sqrt{3}}{2}, \text{ then the value of } \sin\frac{C}{2} \text{ is}$$

- A.  $\frac{1}{\sqrt{2}}$
- B. 0
- C. 1/2
- D.  $\frac{\sqrt{3}}{2}$

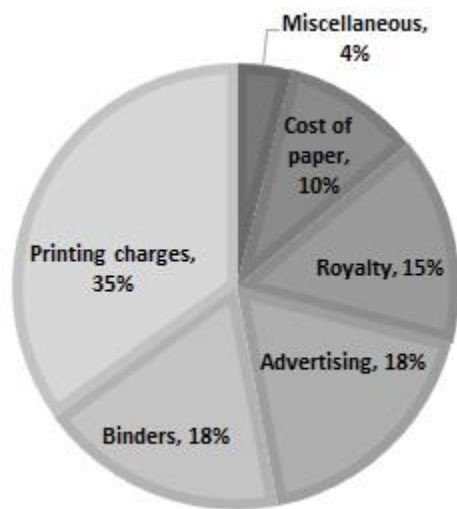
**Question 20.** The compound interest on Rs. 64,000 for 3 years, compounded annually at 7.5% p.a. is

- (A) Rs. 14,400
- (B) Rs. 15,705
- (C) Rs. 15,507
- (D) Rs. 15,075

**Question 21.** The angles of elevation of the top of a temple, from the foot and the top of a building 30 m high, are  $60^\circ$  and  $30^\circ$  respectively. Then height of the temple is

- (A) 50 m
- (B) 43 m
- (C) 40 m
- (D) 45 m

**Question 22.** Study the pie-chart given and answer the following questions.



If the miscellaneous charges are Rs. 6000, then the advertisement charges are

- (A) Rs.12000
- (B) Rs.27000
- (C) Rs.90000
- (D) Rs.25000

**Question 23.** The central angle of printing charge is  $x$  more than that of advertisement charge. Then the value of  $x$  is

- (A)  $72^\circ$
- (B)  $61.2^\circ$
- (C)  $60^\circ$
- (D)  $54.8^\circ$

**Question 24.** What should be the central angle of the sector 'cost of paper'?

- (A)  $22.5^\circ$
- (B)  $54.8^\circ$

(C) 36°

(D) 16°

**Question 25. The ratio between royalty and binder's charges is**

(A) 5:6

(B) 5:8

(C) 6:5

(D) 8:13

Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer
1	D	2	B	3	C	4	D	5	D
6	B	7	D	8	D	9	B	10	C
11	D	12	B	13	C	14	C	15	C
16	C	17	C	18	D	19	C	20	C
21	D	22	B	23	B	24	C	25	A

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