

454

Question paper for the post of JE(TRD) Level 6 on CG-Solapur Division

Date : 10/05/2023

Time : 3 Hrs

Max Marks: 100

Part. I (40 Marks)

Question No 1-10 : 1 Mark each question. Choose/Write the correct option.

Question No 11-20 : 2 Mark each question. Choose/Write the correct option.

Question No 21 : 1 Mark each question.

Direction: In question 1-10 four alternatives are given for the Idiom/Phrase under in the sentence. Choose the alternative which best expresses the meaning of the Idiom/Phrase

1. His investments helped him make a killing in the stock market.

- (A) murder someone quickly
- (B) make money quickly
- (C) lose money quickly
- (D) plan a murder quickly

2. His speech has taken the wind out of my sails.

- (A) made me think of the future
- (B) made me remember my past
- (C) made my words or actions ineffective
- (D) made me depressed

3. The secretary had the information at her fingertips.

- (A) in the compact disc
- (B) not accessible
- (C) on her typewriter
- (D) readily available

4. On the issue of marriage, Sarita put her foot down.

- (A) got down
- (B) walked fast
- (C) stood up
- (D) was firm

5. The minister assured the agitating employees that he would look into their demands sympathetically.

- (A) grant
- (B) examine
- (C) discuss
- (D) watch

6. She keeps blowing hot and cold and therefore, nobody can befriend her for long.

- (A) being unfriendly and critical
- (B) being good and bad alternately
- (C) being friendly at one moment and unfriendly the next
- (D) trying to cool the situation down and then raking it up again

7. The police looked all over for him but drew a blank.

- (A) arrested him
- (B) took him to court
- (C) did not find him
- (D) put him in prison

8. The cops were on their toes throughout the day.

- (A) hurried
- (B) alert
- (C) eager
- (D) alert

9. In spite of his recent financial troubles, Ashok has not learnt to cut his coat according to his cloth.

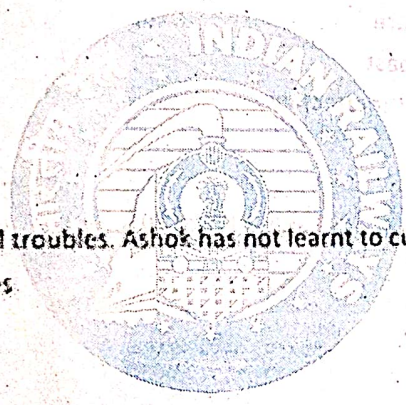
- (A) improve his tailoring abilities
- (B) live within his income
- (C) overcome his problems
- (D) wear modest clothes

10. Ram is very calculative and always has an axe to grind.

- (A) has a private agenda
- (B) fails to arouse interest
- (C) has no result
- (D) works for both sides

11. Given that $(a^2 + b^2) = 60$, then find the value of $(a+b)^2 + (a-b)^2$.

- (A) 90
- (B) 120
- (C) 140



(D) 150

12. 3 years ago, the ratio of Maya's and Shikha's age was 5:9 respectively. After 5 years, this ratio would become 3:5. Find present age of Maya?

- (A) 40
- (B) 45
- (C) 43
- (D) 53

13. If $N:388 = 3:57$, Find N.

- (A) $\frac{2}{3}$
- (B) $\frac{1}{3}$
- (C) 3
- (D) 2

14. The distance between two points A and B is covered in at a speed of 50 km/hr. If the speed is increased by 5 km/hr, how much time would be saved?

- (A) 5 minutes
- (B) 15 minutes
- (C) 50 minutes
- (D) 30 minutes

15. The ratio of ages of Jai and Joy is 5:2. The sum of their ages is 63. After 9 years what will be the ratio of their ages?

- (A) 5:2
- (B) 2:1
- (C) 3:2
- (D) 4:3

16. Which of the following is known as the Pink City of India?

- (A) Mumbai
- (B) Jaipur
- (C) Surat
- (D) Panna

17. Where was the Railway first introduced in India –

- (a) Mumbai
- (b) Dehradun

- (c) Darjeeling
(d) Chennai

18. Which of the following is Capital of India?

- (A) Mumbai
(B) Jaipur
(C) Surat
(D) New Delhi

19. Independence Day of India?

- (A) 26th January
(B) 10th May
(C) 15th August
(D) 25th December

20. Iron man of India

- (A) Vallabhbhai Patel
(B) Jawahar Lal Nehru
(C) Rajendra Prasad
(D) Rabindranath Tagore

21. Write Full form of the following :

RBI, PMO, CR, AICTE, IPL, RCF, RDSO, SSE, CEE, IRCTC



Part 2 (60 Marks)

Question No 1-15 : 2 Mark each question. Choose/Write the correct option.

Question No 16-20 : 10 Mark each question (Attempt any 3)

1. The low power factor results in

- (a) Increased losses (b) Decreased losses (c) No effect on losses (d) Better generating efficiency

2. Unit of resistance is

- a) Ampere b) Volts c) Ohm d) None

- 450
3. As per Ohm's law
a) $V = IR$ b) $V = I/R$ c) $R = V \times I$ d) None
 4. A.C. is converted into D.C. by
a) Dynamo b) Motor c) Transformer d) Rectifier
 5. An electric lamp is marked 100 watt. It is working on 200 Volts. The current through the lamp is
a) 0.5 Amp b) 0.2 Amp c) 5.0 Amp d) 1.0 Amp
 6. Laminated core is used to reduce
(a) Hysteresis loss (b) Eddy current loss (c) Copper loss (d) Iron loss
 7. When resistances are connected in parallel, the equivalent resistance
(a) Decreases (b) Increases (c) No change (d) May increase or decrease
 8. If distribution of power is raised from 11 kV to 66 kV, the voltage drop would lower by
a) 6 times b) 1/6 times c) 36 times d) 1/36 times
 9. The kVAR rating required for improving the power factor of a load operating at 500 kW and 0.85 power factor to 0.95 is _____.
a) 145 kVAR b) 500 kVAR c) 50 kVAR d) 100 kVAR
 10. The protective device to indicate the internal fault in a transformer is
(a) Thermal relay (b) Bucholz relay (c) OVR (d) EFR
 11. Which of the following does not change in a transformer?
a. Current b. Voltage c. Frequency d. All of the above
 12. Unit of energy is
a) Kilo volt hours b) Kilo watt hours c) Kilo watt d) None
 13. The voltage across the circuit breaker pole after final current zero is
a) Restriking voltage b) Supply voltage c) Recovery voltage d) None
 14. Which of thermal protection switch is provided in power line system to protect against?
a) Over voltage b) Short circuit c) Temperature rise d) Overload
 15. Basic quantity measured in a distance relay is
a) Impedance b) Current difference c) Voltage difference d) None

449

Attempt any 3 questions from 16-20

16. Write Short note on current transformer and potential transformer. Explain difference between CT and PT.
17. (a). Define Resistance?. What are the various factors affecting resistance of a conductor? (b). Two wires one of copper and other of iron, are of the same length and same radius. Which will have more resistance? Give reason.
18. Define working principle and construction of Induction Motor. Draw torque speed curve.
19. Write Short Note on following: a) Ohm's law b) Faraday's law of electromagnetic Induction c) Semiconductors d) Lenz's Law
20. Explain what is a transformer with circuit diagram . Explain its principle, various types, uses and protection used for transformer.

