

200

Written Test for the post of JE(C&W) Gr. 'C' (GP Rs.4200) on compassionate ground in
Mechanical department of Solapur division/Central Railway

Date:12.01.23

Total Marks=100

Time-03 hours

IMPORTANT NOTICE

1. Answers may be written in Hindi or English.
2. Unused papers of answer sheet to be crossed.
3. Objective type questions will not be evaluated in case of cutting/overwriting.
4. Mobile/Calculators/Pagers etc are not allowed in the exam hall, otherwise candidate will be debarred from the exam.
5. Whitener should not be used in the exam. Hall.
6. Except answers nothing should be written in the answer sheet.

PART-I

Question No.1. Attempt any three of following

(5x3=15)

(I) Write an Essay on following subject on any one in English.

(a) An Half hour on Railway platform.

(b) 26th January Republic day

(c) Festival in India

(d) Covid-19

(II) Write a application letter to Municipal corporation regarding cleanliness in your ward.

(III) The sum of the ages of a son and father is 60 years. After 4 years, the age of father will be three times that of the son. Find the age of son and father.

(IV) A body starts from the rest accelerate to a velocity of 20 m/s in a time of 10 second.
Determine the acceleration of the body.

Question No.2. Chose the correct option

(1x20=20)

1. Which city is called as Pink city?
a. Jaipur b. Delhi c. Solapur d. Mumbai
2. Charminar is located in -----city.
a. Agra b. Bangalore c. Pune d. Hyderabad
3. First women president of India is-----
a. Mamta Banarjee b. Sarojini Naidu c. Pratibha Patil d. Indra Gandhi
4. Capital of Uttar Pradesh is-----
a. Gujrat b. New Delhi c. Kolkata d. Lucknow
5. Amongst following who has written our National Anthem?
a. Bankim Chandra Chaterji b. Allama Iqubal c. Ravindra Nath Tagore
d. Suryakant Tripathi Nirala
6. Who has written Constitution of India?
a. Bhagat Singh b. Dr. Babasaheb Ambedkar c. Pandit Jawaharlal Nehru
d. Mahatma Gandhi
7. 37, 41, 43, 47, -----?
a. 53 b. 49 c. 57 d. None of these
8. Which is the national animal of India?
a. Tiger b. Lion c. Elephant d. Cheetah
9. Which is the largest Ocean in the world?
a. Indian Ocean b. Arctic Ocean c. Pacific Ocean d. Atlantic Ocean
10. Which state in India is having highest population?
a. Uttar Pradesh b. Bihar c. Maharashtra d. Madhya Pradesh
11. P.V. Sindhu is associated with which sport?
a. Cricket b. Badminton c. Hollyball d. Tennis
12. How many states are there in India?
a. 26 b. 30 c. 28 d. 24

13. How many millimeters are there in a one centimeter?
 a. 100 millimeters b. 1 millimeters c. 10 millimeters d. 1000 millimeters
14. Who is the current finance minister of India?
 a. P. Chidambaram b. Arun Jaitley c. Nirmala Sitharaman d. Manmohan Singh
15. Current Rail minister of India is-----
 a. Piyush Goyal b. Lalu Prasad Yadav c. Nitish Kumar d. Ashwini Vaishnaw
16. $149.01 + 3.621 + 1.1 =$ ----?
 a. 153.623 b. 143.731 c. 153.821 d. 153.731
17. India's first train started in -----
 a. 1850 b. 1870 c. 1853 d. 1847
18. Choose appropriate number for fourth place $8 : 27 : 64 : \text{---}?$
 a. 225 b. 125 c. 115 d. 625
19. What is the full form of GST?
 a. General Service Tax b. Goods Service Tax c. Gross Service Tax d. General Sales Tax
20. Who was the first prime minister of India?
 a. Jawaharlal Nehru b. Mahatma Gandhi c. Sardar Vallabhbhai Patel d. Bhagat Singh

Question No.3. Expand the following abbreviations (1x5=5)
 a. WHO b. RTO c. MBBS d. DRM. e. IAS

Question No.4 Attempt any five (6x5=30)

1. Describe all three Newton's laws of motion
2. Define Speed, Velocity and acceleration
3. Comparison between Petrol engine & Diesel engine
4. Write short note on heat treatment
5. Define stress & strain
6. Define work, power and energy
7. A B C analysis of Inventory control

Question No.5 Chose the correct option

(1x20=20)

1.The unit of stress in S.I units is-----

- a.N/mm² b.KN/mm² c.N/m² d.any of these

2.Strain is equal to-----

- a.Original length/change in length b. change in length/ Original length
c. Original length x change in length d. Original length + change in length

3.One Kg force is equal to

- a. 7.8 N b. 8.9 N c.9.8 N d.12 N

4. 1000 meters distance is equal to

- a. 1 KM b. 10 KM c. 100 KM d. 1000 KM

5.When a bullet is fired upwards vertically , it gains in

- a. Speed b.Kinetic energy c.Potential energy d.Acceleration

6.If the resistance of the conductor is increased then current will be

- a.Remain the same b.Increase c.Decrease d. First increase than decrease

7.Solid-----is known as dry ice

- a.Nitrogen b.Hydrogen c.Oxygen d.Carbon dioxide

8.The compression ratio is the ratio of

- a.Swept volume to total volume b. Total volume to swept volume
c. Swept volume to clearance volume d. Total volume to clearance volume

9.Air conditioning means

- a.Cooling b.Heating c.Dehumidifying d. All of these

10.The brake power is the power available

- a.In the engine cylinder b,At the crank shaft c.At the crank pin d. none of these

11. When the spring of a watch is wound, it will possess

- a.Strain energy b.Kinetic energy c.Potential energy d. none of these

12. Internal gear can be made by

- a. Hobbing b. Milling c. Shaping with planer cutter d. None of these
13. The first Nuclear power plant in India was located at
a. Kota b. Tarapur c. Kalppam d. None of these
14. Supercharging the power developed by engine
a. Has no effect on b. Increases c. Decreases d. None of these
15. In a petrol engine, if diesel is used, then the engine
a. Not run b. Run at high speed c. Explode d. None of these
16. The property of material essential for spring material is
a. Stiffness b. Ductility c. Resilience d. None of these
17. Seam welding is welding process
a. Continuous b. Multispot c. Arc d. None of these
18. Cast iron & steel pipes are produced by
a. Slush casting b. Die casting c. True centrifugal casting d. None of these
19. The process extensively used for making bolts & nuts is
a. Cold peening b. Cold heading c. Extrusion d. None of these
20. The process used to improve fatigue resistance of the metal by setting up compressive stresses in its surface is known as
a. Hot piercing b. Extrusion c. Cold peening d. None of these

Question No.6 State whether the following are true or false

(1x10=10)

1. Fixture does not guide the tool.
2. The shear stress at the centre of circular shaft under torsion is zero.
3. A resultant force is a single force which produces the same effect as produced by all the given forces acting on a body.
4. The ignition quality of diesel oil is expressed by octane number.
5. Carburetor is used to supply petrol & air.
6. Kerosene is the lightest and most volatile liquid fuel.
7. When the gas is heated at a constant volume, the heat supplied increases the internal energy of the gas.
8. Venturimeter is used to measure velocity of a flowing liquid.

a. The mercury does not wet the glass. This is due to the property of surface tension of the liquid.
The value of surface tension is 0.48 N/m

