RRB ALP Mechanic Motor Vehicle 23 Jan 2019 Official Paper (Shift 3) (Previous Year Paper)

RRB Assistant Loco Pilot (ALP) • 2019 • 175 questions • 150 minutes • Answer key

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PART A

Q1. Name the scientist who discovered bacteria ?

(a) Robert Koch
(b) James Chadwick
(c) Eugen Goldstein
(d) A V Leeuwenhoek

Q2. If a body has a specific gravity of less than 1, then it will float in/on _____.

(a) air
(b) water
(c) liquids
(d) mercury

Q3. Which of the following options does not have an SI base unit?

(a) Amount of substance
(b) Frequency
(c) Luminous intensity
(d) Electric current

Q4. How many medals did India win in Rio Olympics, 2016?

(a) 3
(b) 4
(c) 2
(d) 5

Q5. It is mainly due to the gravitational effect of the _____ on the rotating earth that the level of water in the sea rises and falls.

(a) Venus
(b) Mercury
(c) Moon
(d) Sun

Q6. Two resistance of 2Ω and 6Ω are connected in series and this combination is connected across a 12 V battery. Find the current in the 6Ω resistor.

(a) 3.5 A
(b) 1. 5 A
(c) 0.5 A
(d) 2.5 A

Q7. Substances that are broken down by biological processes are said to be _____.

(a) reusable
(b) non-biodegradabl
(c) non-reusable
(d) biodegradable

Q8. A software program that has been developed to harm other computers is called a/an _____.

(a) server
(b) LAN
(c) malware
(d) operating system

Q9. Kuchipudi has its roots in which Indian State?

(a) Arunachal Pradesh
(b) Kerala
(c) Andhra Pradesh
(d) Himachal Pradesh

Q10. Which Indian cricketer received the Padma Bhushan in 2018?

(a) MS Dhoni
(b) Virat Kohli
(c) Sachin Tendulkar
(d) Saurav Ganguly

Q11. JPEG stands for _____.

(a) Joint Program Experts Group
(b) Joint Program Executing Group
(c) Joint Photographic Experts Group
(d) Joint Program Experimental Group.

Q12. Two resistors, one of 12 Ω and the other of 24 Ω are connected in parallel. This combination is connected in series with a 22 Ω resistor and a 12 V battery. The current in the 12 Ω resistor is _____.

(a) (8/15) A
(b) (2/15) A
(c) (6/15) A
(d) (4/15) A

Q13. RK Narayan is famous for his book _____.

(a) The Room on the Roof
(b) Two Livers
(c) Malgudi Days
(d) A suitable Boy

Q14. _____ protection must be worn whenever noise levels exceed the noise exposure standard.

(a) Hearing
(b) Head
(c) Eye
(d) Foot

Q15. A wire of length 1 and radius r has a resistance R. The resistance of another wire made of the same material but having half its length and half its radius will be.

(a) 4R
(b) R/2
(c) 2R
(d) R

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Q16. Safety boots or shoes must be worn in designated areas to protect your _____ from falling objects.

(a) eye
(b) ear
(c) head
(d) feet

Q17. A cylindrical wire of length L and radius r has a resistance of R. The resistance of another wire of the same material but thrice its length and one-third its radius will be _____.

(a) 27R
(b) 9R
(c) R
(d) 3R

Q18. If a body is NOT homogeneous, then its density is a function of its _____.

(a) pressure
(b) acceleration
(c) position
(d) velocity

Q19. Two resistors of 10Ω and 20 Ω area connected in series and this combination is connected across a 30 V supply voltage. Find the voltage across the 10 Ω resistor.

(a) 20 V
(b) 10 V
(c) 5 V
(d) 15 V

Q20. Which one of these is a harvest festival?

(a) Teej
(b) Janmashtami
(c) Deepawali
(d) Onam

Q21. 86°F is equal to _____

(a) 20°C
(b) 30°C
(c) 34°C
(d) 10°C

Q22. Where is the Headquarters of UNESCO located?

(a) New York City
(b) Geneva
(c) Paris
(d) Washington DC

Q23. Name of the painter of famous painting, ‘Mahishasura’.

(a) MF Hussain
(b) Amrita Sher-Gil
(c) Raja Ravi Verma
(d) Tyeb Mehta

Q24. What is the work that needs to be done to increase the speed of a 1 kg ball from 2 m/s to 4 m/s?

(a) 8 J
(b) 10 J
(c) 6 J
(d) 12 J

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Q25. The Ajanta Caves in Maharashtra feature paintings and sculptures that depict _____ tales.

(a) Arabic
(b) Islamic
(c) Buddhist
(d) Maratha

Q26. The volume of a given amount of water _____ between 0°C to 4°C.

(a) is zero
(b) decreases
(c) remains constant
(d) increases

Q27. Two resistance of 2Ω and 6Ω are connected in series and this combination is connected across a 12 V bettery. Find the power supplied by the battery.

(a) 10 W
(b) 18 W
(c) 16 W
(d) 14 W

Q28. An object weighs X units on the earth. If we take the same object to the moon, its weight there will be _____.

(a) zero
(b) less than X
(c) equal to X
(d) more than X

Q29. A body starts from rest. Its displacement is proportional to _____ when its acceleration is constant.

(a) time squared
(b) velocity
(c) work
(d) time

Q30. A source of voltage V maintains a current i in a circuit. The energy supplied to the circuit by the source in time t is _____.

(a) Vit
(b) 1/Vit
(c) Vi/t
(d) V/it

Q31. Who was the first governor of the Reserve Bank of India?

(a) Sir James Braid Taylor
(b) KR Puri
(c) HVR Iyengar
(d) Sir Osborne A Smith

Q32. A car covers 400 m in 20 seconds. Find the average speed (in km/hr) of the car.

(a) 72
(b) 124
(c) 108
(d) 36

Q33. If $\sin\theta = 15/17$, then $\cot\theta = ?$

(a) 8/15
(b) 8/17
(c) 15/8
(d) 17/15

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Q34. In an examination, the highest score and the lowest score are different by 55 and the higher one was 9/4 times the lower one. Find the lowest score.

(a) 40
(b) 36
(c) 44
(d) 48

Q35. A number is as much greater than 50 as it is lesser than 84. What is the number?

(a) 65
(b) 66
(c) 68
(d) 67

Q36. If $x = \sqrt{125} \times \sqrt{30} \times \sqrt{6}$, then x is equal to:

(a) 175
(b) 125
(c) 136
(d) 150

Q37. A got Rs. 80 as his share of profit where the total profit was Rs. 240 and the ratio of profit distribution between A and B was x : 2. What is the value of x?

(a) 1
(b) 4
(c) 2
(d) 5

Q38. What is the median of 8, 5, 7, 9, 11, 6, 10?

(a) 9
(b) 8
(c) 10
(d) 7

Q39. If $5050 \times 0.5x = 25250$, then $2505 \div x^2 = ?$

(a) 0.2505
(b) 25.05
(c) 2.505
(d) 250.5

Q40. An article of marked price Rs. 12000 was sold. Had a discount of 15% been offered, a profit of 2% would have been made. What was the cost price?

(a) Rs. 10,200
(b) Rs. 10,000
(c) Rs. 11,000
(d) Rs. 10,800

Q41. A sum of Rs. 2,000 was spent in buying a pair of trousers. The sum spent was 2/5^(th) of the total money Shashi had with her. How much was the total money she had?

(a) Rs. 4,000
(b) Rs. 4, 250
(c) Rs. 4, 750
(d) Rs. 5,000

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Q42. A machine was bought for Rs. 1,500 and a repairing charge of Rs. 100 was paid afterwards. At what price should it be sold to gain a profit of 25%?

(a) Rs. 2,040
(b) Rs. 1,960
(c) Rs. 2,000
(d) Rs. 1, 920

Q43. In angular measurement, one radian is equivalent to _____ degree (approximately).

(a) 65.27
(b) 57.27
(c) 90
(d) 180

Q44. A and B can do a work in 15 days. B and C can do the work in 20 days and A and C can do the work in 10 days. In how many days will they together completed the work?

(a) 10.67 days
(b) 10.91 days
(c) 10.71 days
(d) 9.23 days

Q45. Pipes A and B can fill a tank in 12 minutes and 16 minutes respectively. Both A and B are opened for 4 minutes and then A is closed. How much extra time will B take to fill the tank completely?

(a) 20/3 minutes
(b) 7 minutes
(c) 21/4 minutes
(d) 6 minutes

Q46. A can do 2/5 of a work in 10 days. B can do ½ of the some work in 10 days. They worked together for 5 days and then A left. In how many days will B finish the remaining work?

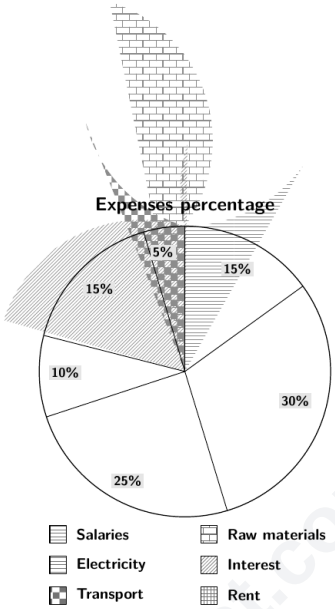
(a) 8
(b) 10
(c) 11
(d) 9

Q47. Reflection of point (-2, -6) on the Y-axis is:

(a) (2, 6)
(b) (-6, -2)
(c) (-2, 6)
(d) (2, -6)

Q48. The pie chart shows the breakup in percentage of the various expenses of a Company. Study the diagram and answer the following question.

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What is the interest expense if total expenses is Rs. 25000.

(a) Rs. 2, 500
(b) Rs. 1, 800
(c) Rs. 9, 000
(d) Rs. 5, 000

Q49. A motorcycle travelled 1000 m at 36 km/hr. Find the time (in seconds) taken by the motorcycle to cover this distance.

(a) 300
(b) 100
(c) 400
(d) 200

Q50. A 4-digit number 1xy7 is divisible by 11. What is the value of x - y?

(a) -8
(b) -2
(c) -4
(d) -6

Q51. Tap M and N can together fill a cistern in 48/13 minutes. N alone can fill it in 6 minutes. How much time will M alone take to fill the cistern?

(a) 9.6 minutes
(b) 9 minutes
(c) 9.4 minutes
(d) 8.6 minutes

Q52. What is the curved surface area of a hemisphere whose radius is 7 cm? (take π = 22/7)

(a) 616 cm^2
(b) 154 cm^2
(c) 308 cm^2
(d) 924 cm^2

Q53. An airplane flies at the speed of 50 m/s. How much distance (in km) will it cover in a flight of 5 hours?

(a) 895
(b) 850
(c) 880
(d) 900

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Q54. What is the distance between the points (4, 3) and (3, -2)?

(a) √26
(b) √24
(c) 6
(d) 5

Q55. sec 45° - tan 60° = ?

(a) • √3 + √2
(b) • √3 - √2
(c) (√3)/2
(d) √3 + √2

Q56. What is the least number which when doubled is perfectly divisible by 7, 12 and 15?

(a) 420
(b) 210
(c) 214
(d) 220

Q57. A sum of Rs. 10,000 amounts to Rs. 11, 449 in 2 years, when the interest is compounded annually. The interest rate percent per annum is:

(a) 6%
(b) 1%
(c) 7%
(d) 8%

Q58. The ages of X and Y are in the ratio 4 : 7. Three years earlier, the ratio of their ages was 1 : 2. What is the difference between their current ages (Y - X)?

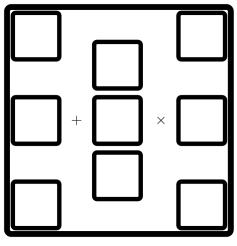
(a) 3
(b) 6
(c) 9
(d) 7.5

Q59. What is 80% of 50% of 90?

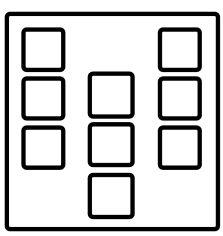
(a) 30
(b) 34
(c) 32
(d) 36

Q60. Choose the figure that is different from the rest.

(a)

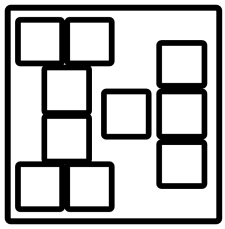


(b)

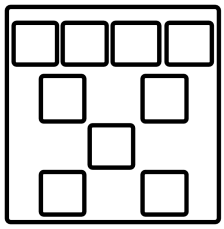


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(c)



(d)



Q61. A series is given, with one number missing. Choose the correct alternative from the given ones that will complete the series.

1.14, 1.28, 1.42, ?, 1.70, 1.84

(a) 1.56
(b) 1.54
(c) 1.68
(d) 1.62

Q62. Two planes E and F start flying from the same point. E flies 7 km west, then turns to its left and flies 15 km. Meanwhile F flies 11 km east and turns right and flies 15 km. Where is F with respect to E?

(a) F is 18 km west of E
(b) F is 4 km east of E
(c) F is 18 km east of E
(d) F is 4 km west of E

Q63. Given below are some letters, that each of these letters has a corresponding number. Select the combination of numbers from the option so that the jumbled letters arranged accordingly will form a meaningful English word.

H T R U O A

1 2 3 4 5 6

(a) 6, 4, 2, 1, 5, 3
(b) 3, 4, 5, 2, 1, 6
(c) 1, 6, 2, 4, 5, 3
(d) 2, 1, 5, 3, 4, 6

Q64. I, J, K and L are sitting in a row. L and I are sitting next to each other and I and K are the ends. Who is sitting next to J?

(a) Only K
(b) L and I
(c) K and L
(d) Only L

Q65. Select the option that is related to the third term in the same way as the second term is related to the first term.

Tall : Short ? Glad : ?

(a) Sad
(b) Happy
(c) Emotion
(d) Smile

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Q66. If, '+' represents '×', '-' represents '+', '×' represents '÷' and '÷' represents '-' then find the value of the following expression.

9 × 3 + 6 ÷ 2 = ?

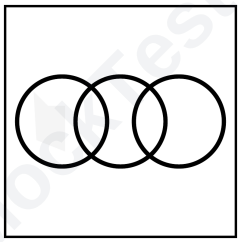
(a) 20
(b) 10
(c) 12
(d) 16

Q67. If G + H means G is daughter of H, G- H means G is sister H and G * H means G is husband of H, which of the following shows that I is the daughter of H?

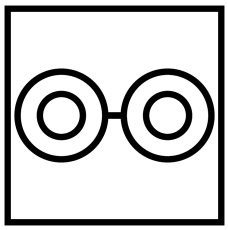
(a) I – J + F * H
(b) I + J - F * H
(c) I – J * F + H
(d) I * J - F + H

Q68. Which of the following Venn diagrams best represents the relationship between Indians, doctors and women?

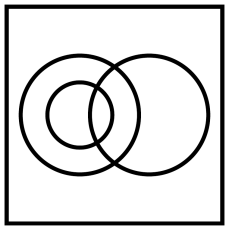
(a)



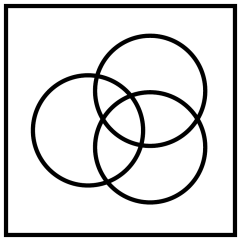
(b)



(c)



(d)



Q69. Given below are two statement, followed by two conclusion, I and II. You have to consider the statement to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow(s) from the given statements.

Statement 1: No quadrilaterals are polygons.

Statement 2: All polygons are rhombuses.

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Conclusion I: Some rhombuses are quadrilaterals.

Conclusion II: Some rhombuses are polygons.

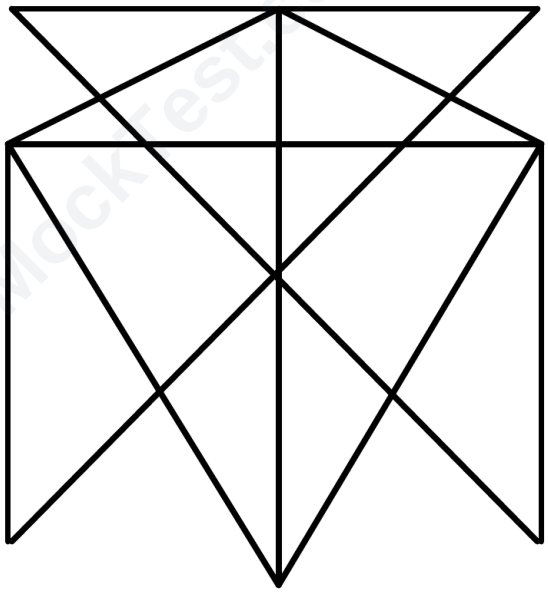
(a) Neither I nor II follows
(b) Only conclusion II follows
(c) Only conclusion I follows
(d) Both I and II follow

Q70. Which two signs should be interchanged to make the given equation correct?

9 ÷ 3 + 8 × 2 – 15 = 2

(a) × and -
(b) ÷ and -
(c) • and ×
(d) • and -

Q71. What is the minimum number of lines required to make the given image?



(a) 13
(b) 12
(c) 10
(d) 9

Q72. A series is give, with one term missing. Choose the correct alternative from the given ones that will complete the series.

OOOOOX, OOOOXX, OOOXXX, OOXXXX, ?

(a) XXXXXX
(b) OOXXXXX
(c) OOXXXX
(d) OXXXXX

Q73. If C $ D means C is daughter of D, C & D means C is mother of D and C % D means C is son of D, then what does W $ X & Y % Z mean?

(a) Z is wife of W
(b) Z is mother of W
(c) Z is father of W
(d) Z is daughter of W

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Q74. Given below is a question, followed by two arguments, I and II. You have to decide which of the given arguments, if any, is a strong argument, with respect to the question.

Question: Should advertisements be banned on television?

Argument I: Yes, advertisements are immoral.

Argument II: No, advertisements bring in revenue which helps reduce cost for viewers.

(a) Only argument II is strong.
(b) Only argument I is strong.
(c) Neither I nor II is strong.
(d) Both I and II are strong.

Q75. Select the option that is related to the third number in the same way as the second number is related to the first number.

-9/11 : 11/9 ? 13/2 : ?

(a) 3/7
(b) 2/13
(c) -2/13
(d) -7/3

Q76. Given below is a statement followed by two assumption numbered I and II. You have to decide which of the assumptions is/are implicit in the statement.

Statement: The human body produces Vitamin D when exposed to sunlight.

Assumption I: The human body will have Vitamin D even if it is not consumed via food.

Assumption II: A large portion of the global population suffers from Vitamin D deficiency.

(a) Both I and II are implicit
(b) Only assumption II is implicit
(c) Neither I nor II is implicit
(d) Only assumption I is implicit

Q77. A salesperson starts from his office and drives 2 km east, then turns north and drives 7 km, then turns to his right and drives 6 km, then turns south and drives 7 km. Where is he now with respect to his starting position?

(a) 8 km east
(b) 4 km west
(c) 4 km east
(d) 8 km west

Q78. Unscramble the letters in the words given below and find the odd word out.

(a) FLOW
(b) ILNO
(c) ERTIG
(d) WCO

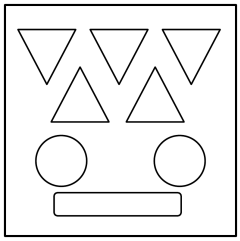
Q79. Find the odd group of letters from the given alternatives.

(a) EFG
(b) PQR
(c) VWX
(d) HJL

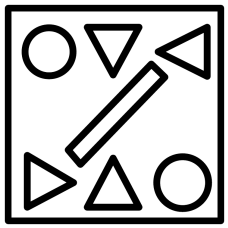
Q80. Choose the figure that is different from the rest.

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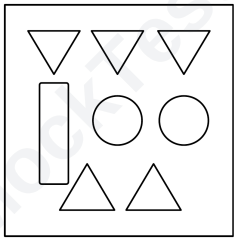
(a)



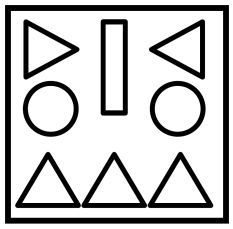
(b)



(c)



(d)

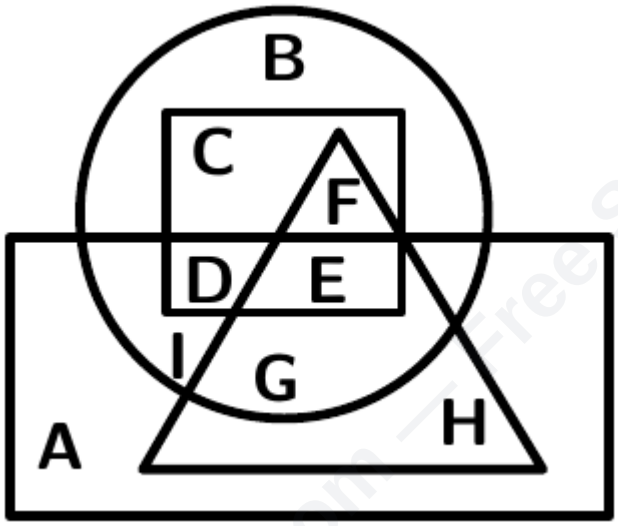


Q81. In a code language, 295 means ‘water is liquid’, 549 means ‘oil is liquid’ and 824 means ‘oil on water.’ Find the code for ‘on’.

(a) 4
(b) 2
(c) 8
(d) 5

Q82. In the following figure, square represents Chinese, triangle represents dancers, circle represents male and rectangle represents architects. Which set of letters represents dancers who are male?

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(a) DEIG
(b) DEF
(c) IGH
(d) GEF

Q83. The abbreviation AC in an engineering drawing stands for _____.

(a) Across Corners
(b) Aerial Cut
(c) Attached Circle
(d) Air Conditioning

Q84. Greater the value of _____ of a material, the more rapidly it will conduct heat.

(a) melting point
(b) latent heat
(c) regelation
(d) thermal conductivity

Q85. The effort applied to move a load is 15 units and the mechanical advantage is observed to be 3. Find the load.

(a) 5 units
(b) 3 units
(c) 15 units
(d) 45 units

Q86. What is the unit's digit in 3^(66)× 6^(41) × 7^(53)

(a) 8
(b) 3
(c) 6
(d) 7

Q87. If the width of a standard engineering drawing sheet is 841 mm, then its length would be _____ mm.

(a) 1189
(b) 1250
(c) 1000
(d) 1216

Q88. A 200 g block of iron was heated from 30°C to 60°C. How much heat was transferred to the block (specific heat of iron is 450 Jkg^(-1)K^(-1))?

(a) 6000 J
(b) 27 J

(c) 2700 J
(d) 270 J

Q89. If a machine overcomes a load 'L' and the distance travelled by the load is 'Ld', the work done by the load will be _____.
(a) L × Ld
(b) L/Ld
(c) Ld/L
(d) 1/(L × Ld)

Q90. A brass rod (thermal conductivity 109 J/s m K) has an area of cross section 0.04 m² and length 20 cm. If the two end of the rod are maintained at a temperature difference of 200°C, the rate of heat flow through the rod is _____.
(a) 3.42 kJ/s
(b) 2.32 kJ/s
(c) 4.36 kJ/s
(d) 5.80 kJ/s

Q91. The effort in a class 1 lever is in _____ direction(s).
(a) three
(b) multiple
(c) two
(d) one

Q92. The velocity ratio of a simple machine is the ratio of distance traveled by the _____ to the distance traveled by the _____ in the machine.
(a) load; load
(b) effort; load
(c) load; effort
(d) effort; effort

Q93. If straight lines are drawn from various points on the contour of an object to meet a plane, the figure obtained on the plane is called the _____ of the object.
(a) development
(b) dimensioning
(c) projection
(d) animation

Q94. A _____ is a theoretical exact plane, axis or point location that GD & T or dimensional tolerances are referenced to.
(a) flange
(b) frame
(c) section
(d) datum

Q95. Molar specific heat capacity of a substance is _____.
(a) (1/μ)((Δ Q)/(Δ T))
(b) μ ((Δ Q)/(Δ T))
(c) (1/μ)((Δ T)/(Δ Q))
(d) μ ((Δ T)/(Δ Q))

Q96. In engineering drawing, the letters LH signifies _____.
(a) Level Hide
(b) Left Hand
(c) Low Heat
(d) Limit of Height

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Q97. Identify the material having high coefficient of volume expansion.

(a) Brass
(b) Alcohol
(c) Glass
(d) Water

Q98. An object starts from rest at x = 0 m and moves with a constant acceleration of 1.6 m/s² along the x-axis. During its journey from x = 12.8 m to x = 20.0 m, its average velocity will be _____.

(a) 7.2 m/s
(b) 3.6 m/s
(c) 8.8 m/s
(d) 2.4 m/s

Q99. You are given a question and two statements. Identify which of the statements is/are necessary/sufficient to answer the question.

Question: What was the discount percent offered on the soap by the store?

Statements:

I) The store is giving 1 soap free on purchase of three.

II) Rs. 10 discount is offered on purchase of soap worth 36.

(a) II alone is sufficient while I alone is not sufficient
(b) I alone is sufficient while II alone is not sufficient
(c) Neither I nor II is sufficient
(d) Either I or II is sufficient

Q100. Identify the material having low coefficient of volume expansion

(a) Iron
(b) Mercury
(c) Brass
(d) Aluminium

PART B

Q101. In an engine, which shaft controls a piston's movement?

(a) Propeller shaft
(b) Axle
(c) Crankshaft
(d) Camshaft

Q102. Which of the following is NOT an air conditioning component of an automobile?

(a) Generator
(b) Compressor
(c) Evaporator
(d) Condenser

Q103. Which of the following is NOT a function of a damper?

(a) It avoids the oscillation (repeated expansion or compression of the spring).
(b) It controls the quick compression of the spring after hitting a bump or a pothole.
(c) It controls the catalytic convertor's performance as per the frequency of vibration.
(d) It controls the quick expansion of the spring after hitting a bump or a pothole.

Q104. Which of the following devices is used for checking the level of engine's lubricating oil?

(a) Dipstick
(b) Autocollimator
(c) Hydrometer

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(d) Multimeter

Q105. Generally, which cable colour code is used for earthing a fuel tank?

(a) White
(b) Green
(c) Black
(d) Brown

Q106. What is the function of a float in a carburetor?

(a) It controls the level of petrol in the float chamber.
(b) It controls the flow of fuel.
(c) It controls the flow of air.
(d) It controls the flow of fuel and air mixture.

Q107. Drum brakes are adjusted to _____.

(a) reduce loss of fluid
(b) reduce the evaporation of the brake fluid
(c) tighten the wheel bearings
(d) compensate for liner wear

Q108. How many injectors are required for a six-cylinder MPFI engine?

(a) 3
(b) 2
(c) 5
(d) 6

Q109. Which of the following does NOT belong to the fuel supply system of a diesel engine?

(a) Compensating jet
(b) Injector
(c) Fuel pump
(d) Spray nozzle

Q110. The function of a master cylinder in an ABS braking system is:

(a) to increase pressure of braking.
(b) to reduce pressure of braking.
(c) to allow pressure for the brakes.
(d) to stop the vehicle.

Q111. Why are glow plugs used in CI engines?

(a) To cool an overheated engine
(b) To provide light inside the cylinder for carrying out maintenance activities
(c) To control the quantity of the fuel being sprayed
(d) To assist in engine starting

Q112. Which of the following is/are an engine emission mainly from a CI engine and NOT from an SI engine?

(a) Carbon monoxide
(b) Nitrogen oxide
(c) Particulates and soot
(d) Hydrocarbons

Q113. An inductive proximity sensor is used to detect _____.

(a) wooden object
(b) metal objects
(c) sand objects
(d) plastic objects

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Q114. An Anti-lock Braking System prevents the whels from _____.

(a) heat loss
(b) power loss
(c) speed-up
(d) locking-up

Q115. Generally, which type of axle is used in heavy vehicles?

(a) Non-floating
(b) Three quarter floating
(c) Fully floating
(d) Semi-floating

Q116. Combined angle is given by _____.

(a) camber + king pin inclination
(b) camber + slip angle
(c) camber + castor
(d) castor + steering axis inclination

Q117. A two piece propeller shaft _____.

(a) requires center support bearing
(b) cannot transmit power at an angle
(c) is made from a solid rod
(d) does not need any slip joint

Q118. The clutch is located between the engine and the _____.

(a) differential gear
(b) universal joint
(c) rear axle
(d) gearbox

Q119. Which of the following is NOT related to diesel engines?

(a) DDIS
(b) CRDI
(c) D4D
(d) MPFI

Q120. The idle speed control of an electronic fuel injection system uses a/an _____.

(a) air control motor
(b) pneumatic system
(c) hydraulic system
(d) idling jet system

Q121. Which of the following parts of an SI engine is NOT used in a diesel engine?

(a) Valves
(b) Timing gears
(c) Camshaft
(d) Spark plug

Q122. While operating the braking system the kinetic energy of a moving vehicle is converted into _____.

(a) work energy
(b) pressure energy
(c) heat energy
(d) potential energy

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Q123. Theoretically, a 4-stroke SI engine works on which of the following cycles?

(a) Bell-Coleman cycle
(b) Joule cycle
(c) Brayton cycle
(d) Otto cycle

Q124. A/An _____ is a sensor which measures the outside air entering the engine.

(a) Throttle Position Sensor (TPS)
(b) Oxygen sensor
(c) Manifold Absolute Pressure sensor (MAP)
(d) Mass Air Flow sensor (MAF)

Q125. Which of the following should be checked first, if the bulb on the dashboard of an automobile does not light when the ignition key is in the 'ON' position?

(a) ECM
(b) Wiring
(c) Bulb
(d) Electrolyte level in the battery

Q126. Which is NOT a component of starting system of an automobile?

(a) Solenoid
(b) Brush Carrier
(c) Crank pin
(d) Armature

Q127. Which of the following is the reason for a spongy brake pedal in a hydraulic braking system?

(a) Dirt on the disc
(b) Faulty metering valve
(c) Air in the system
(d) Frozen piston of the caliper

Q128. A bounce test is carried out to check the functioning of a _____.

(a) front axle
(b) braking system
(c) shock absorber
(d) steering system

Q129. Which of the following is used for measuring the clearance between the valve and the tappet of a valve actuating mechanism?

(a) Feeler gauge
(b) Vernier caliper
(c) Micrometer
(d) Slip gauge

Q130. What is a torsion bar?

(a) It is used to measure the throttle position.
(b) It is a type of spring.
(c) It is a rigid or non-deformable link.
(d) It is a device used to measure the engine torque.

Q131. A voltage regulator is used to vary the _____.

(a) ignition coil voltage
(b) spark voltage
(c) battery voltage
(d) charging voltage

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Q132. The difference between a CI engine and an SI engine is the _____.

(a) type of ignition
(b) type of the valve used
(c) type of the flywheel
(d) type of the crankshaft

Q133. In a Distributorless Ignition System, the distributor is replaced by the_____.

(a) brushes
(b) rotor
(c) ignition switch
(d) insulated coils

Q134. Identify the drive pinion which engages with a gear ring of the flywheel to start the engine in case of a starter motor.

(a) Crankshaft
(b) Alternator
(c) Camshaft
(d) Bendix drive

Q135. The ignition coil of an ignition system acts as a _____.

(a) step up transformer
(b) rectifier
(c) DC to AC converter
(d) switch

Q136. Generally, most of the cars have which of the following engines?

(a) Two-stroke cycle engine
(b) Free piston engine
(c) Rotary Wankel engine
(d) Four-stroke cycle engine

Q137. A wiper circuit of an automobile consists of a/an _____.

(a) operational amplifier
(b) stable multivibrator IC 555
(c) astable multivibrator IC 555
(d) microcontroller

Q138. In between which of the following a Hook's joint is located?

(a) Differential gear and wheels
(b) Gear box and propeller shaft
(c) Clutch and gearbox
(d) Flywheel and clutch

Q139. A torque converter transfers rotating power of the engine into _____.

(a) transmission
(b) brakes power
(c) flywheel power
(d) camshaft power

Q140. Which of the following statements is false in the context of a torque convertor?

(a) Maximum torque multiplication occurs at low speed.
(b) The stator unit redirects the flow of oil to the impeller.
(c) The blades have a curved shape.
(d) The impeller unit drives the oil.

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Q141. Which of the following is the most likely cause of a car NOT getting started?

(a) Dead battery
(b) Faulty fuse
(c) Defective starter
(d) Faulty ignition switch

Q142. What is the function of a shackle in a leaf spring arrangement?

(a) It provides good traction.
(b) It allows the spring length to change.
(c) It allows pivoting of the spring end.
(d) It prevents the squeaking sound.

Q143. A spark plug of an automobile consists of two electrodes. One is ground electrode and the other is _____.

(a) central electrode
(b) dielectric electrode
(c) zero electrode
(d) right electrode

Q144. Which method should be used for cleaning the spark plugs?

(a) Cleaning with wet cloth
(b) Washing with solvent
(c) Rubbing with emery paper
(d) Sand blasting

Q145. Which of the following components replaces a pickup coil in a DLI system?

(a) Igniter
(b) Transistor
(c) Heater plug
(d) ECM

Q146. The voltage generated by an alternator in an automobile is controlled by the _____.

(a) brushes
(b) rotor
(c) starter
(d) rotor winding

Q147. Which of the following activities does NOT increase the tyre life?

(a) 'Penny test' to check the depth of treads
(b) Adjustment of tyre inflation pressure
(c) Wheel alignment as per the service manual
(d) Tyre rotation

Q148. Which of the following is a part of a four-stroke diesel engine?

(a) Spark plug
(b) Contact breaker
(c) Fuel injector
(d) Ignition coil

Q149. Which of the following is NOT a component of an air brake system?

(a) Steering
(b) Foot valve
(c) Brake shoes and drums
(d) Compressor

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Q150. Which of the following is the most likely reason for engine overheating?

(a) Clogged radiator
(b) Thermostat valve stuck open
(c) Defective clutch of the compressor
(d) Radiator fan running continuously

Q151. Which of the following pollutants is a major cause of photochemical smog?

(a) CO
(b) HC
(c) NO_x
(d) SO_x

Q152. In a conventional single plate clutch, the pressure plate is held against the clutch plate by the _____.

(a) thrust bearings
(b) springs
(c) levers
(d) struts

Q153. Which of the following is the most accurate fuel injection system for SI engines?

(a) Direct injection
(b) Manifold injection
(c) Throttle body injection
(d) Port injection

Q154. While overtaking a vehicle, an extra amount of fuel, momentarily required to supply a rich mixture in case of a carburetor is provided by a/an _____.

(a) accelerating system
(b) choke system
(c) idling system
(d) power enrichment system

Q155. Which type of light bulb is used in automobiles?

(a) Incandescent light
(b) Fluorescent light
(c) Neon lights
(d) Halogen lights

Q156. The inward or outward tilt of a wheel from the vertical is termed as _____.

(a) slip angle
(b) steering axis inclination
(c) castor
(d) camber

Q157. How the horn and its switch are connected?

(a) In parallel with the battery
(b) In series with the dynamo
(c) In parallel with the dynamo
(d) In series with the battery

Q158. In an engine, minimum _____ valves are required per cylinder.

(a) 3
(b) 2
(c) 5
(d) 4

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Q159. The difference between a two-stroke and a four-stroke engine is the _____.

(a) thermodynamic cycle
(b) type of ignition
(c) compression ratio
(d) type of fuel used

Q160. For which of the following fuels, a conventional diesel engine will need minimum changes or modifications?

(a) Petrol
(b) Kerosene
(c) Ammonia
(d) Alcohol

Q161. How many filaments does a sealed beam headlight bulb contain?

(a) 4
(b) 1
(c) 5
(d) 3

Q162. The process of brake bleeding is carried out to free the hydraulic braking system from the _____.

(a) excess fluid
(b) excess pressure
(c) air
(d) vacuum

Q163. In a final drive gearing system, which of the following type of gear is NOT used?

(a) Spur
(b) Spiral bevel
(c) Straight bevel
(d) Hypoid

Q164. Which of the following devices is used to control the timing of a Distributorless Ignition System?

(a) Electrical device
(b) Magnetic triggering device
(c) Hydraulic device
(d) Pneumatic device

Q165. Thermocouples are used for measurement of _____.

(a) voltage
(b) pressure
(c) temperature
(d) resistance

Q166. While carrying out servicing of a hydraulically controlled clutch, which of the following should be replaced?

(a) Pilot bearing
(b) Clutch linkage
(c) Clutch fluid
(d) Input shaft

Q167. An ignition timing mark is provided on which of the following?

(a) Distributor shaft
(b) Gearbox shaft
(c) Flywheel
(d) Camshaft

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Q168. In the case of a diesel engine, the power output CANNOT be increased by _____.

(a) increasing the compression ratio
(b) excess supply of air
(c) fine atomisation of the diesel fuel
(d) supplying air at an increased pressure

Q169. In a power transmission system, which of the following devices are there between the drive shaft and the differential?

(a) Final drive
(b) Axels
(c) Clutches
(d) Universal Joint

Q170. In an automobile suspension system, a stabilizer rod is used to reduce the vehicle's tendency to _____.

(a) yaw
(b) pitch
(c) dip
(d) roll

Q171. At what speed the camshaft of an IC engine rotates with respect to the crank shaft?

(a) Same speed
(b) Half speed
(c) Double speed
(d) Triple speed

Q172. A/An _____ controls the maximum oil pressure in the lubrication system of an automobile.

(a) oil filter
(b) pressure relief valve
(c) pump motor
(d) pressure switch

Q173. Exhaust Gas recirculation is used to reduce the _____.

(a) hydrocarbon emission
(b) carbon monoxide emission
(c) sulphur dioxide emission
(d) nitrogen oxide emission

Q174. A fully charged battery will show the open circuit voltage of the order _____.

(a) 12.0 V
(b) 12.2 V
(c) 12.4 V
(d) 12.6 V

Q175. Which of the following is directly driven by a starter motor?

(a) Flywheel
(b) Rear axle
(c) Crankshaft
(d) Camshaft

ANSWER KEY

1	a	2	a	3	a	4	a	5	a	6	a	7	a	8	a	9	a	10	a
11	a	12	a	13	a	14	a	15	a	16	a	17	a	18	a	19	a	20	a
21	a	22	a	23	a	24	a	25	a	26	a	27	a	28	a	29	a	30	a

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31	a	32	a	33	a	34	a	35	a	36	a	37	a	38	a	39	a	40	a
41	a	42	a	43	a	44	a	45	a	46	a	47	a	48	a	49	a	50	a
51	a	52	a	53	a	54	a	55	a	56	a	57	a	58	a	59	a	60	a
61	a	62	a	63	a	64	a	65	a	66	a	67	a	68	a	69	a	70	a
71	a	72	a	73	a	74	a	75	a	76	a	77	a	78	a	79	a	80	a
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101	a	102	a	103	a	104	a	105	a	106	a	107	a	108	a	109	a	110	a
111	a	112	a	113	a	114	a	115	a	116	a	117	a	118	a	119	a	120	a
121	a	122	a	123	a	124	a	125	a	126	a	127	a	128	a	129	a	130	a
131	a	132	a	133	a	134	a	135	a	136	a	137	a	138	a	139	a	140	a
141	a	142	a	143	a	144	a	145	a	146	a	147	a	148	a	149	a	150	a
151	a	152	a	153	a	154	a	155	a	156	a	157	a	158	a	159	a	160	a
161	a	162	a	163	a	164	a	165	a	166	a	167	a	168	a	169	a	170	a
171	a	172	a	173	a	174	a	175	a										

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