02

प्रश्न पुस्तिका / QUESTION BOOKLET

विषय / Subject

Mechanical Engineering

Leet Tech Edu
Screening Test 2011

कोड / Code : 02

पुस्तिका में पृष्ठों की संख्या /
Number of Pages in Booklet : 16

पुस्तिका में प्रश्नों की संख्या /
Number of Questions in Booklet : 100

Mechanical Engineering

02 A

विषय कोड

बुकलेट सीरीज

समय / Time : 2 घंटे / Hours

पूर्णांक / Maximum Marks : 100

INSTRUCTIONS

1. **Answer all questions.**
2. **All questions carry equal marks.**
3. Only one answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as **1, 2, 3, 4**. You have to darken only one circle **or** bubble indicating the correct answer on the Answer Sheet using **BLUE BALL POINT PEN**.
6. **1/3 part of the mark(s) of each question will be deducted for each wrong answer.** (A wrong answer means an incorrect answer **or** more than one answers for any question. Leaving all the relevant circles **or** bubbles of any question blank will not be considered as wrong answer.)
7. The candidate should ensure that Series Code of the Question Paper Booklet and Answer Sheet must be same after opening the envelopes. In case they are different, a candidate must obtain another Question Paper of the same series. Candidate himself shall be responsible for ensuring this.
8. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
9. Please correctly fill your Roll Number in O.M.R. Sheet. 5 marks will be deducted for filling wrong or incomplete Roll Number.

Warning : If a candidate is found copying or if any unauthorised material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted under Section 3 of the R.P.E. (Prevention of Unfairmeans) Act, 1992. Commission may also debar him/her permanently from all future examinations of the Commission.

निर्देश

1. सभी प्रश्नों के उत्तर दीजिए ।
2. सभी प्रश्नों के अंक समान हैं ।
3. प्रत्येक प्रश्न का केवल एक ही उत्तर दीजिए।
4. एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा ।
5. प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले अथवा बबल को उत्तर पत्रक पर नीले बॉल पॉइंट पेन से गहरा करना है ।
6. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का **1/3** भाग काटा जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है । किसी भी प्रश्न से संबंधित गोले या बबल को खाली छोड़ना गलत उत्तर नहीं माना जायेगा।
7. प्रश्न–पत्र पुस्तिका एवं उत्तर पत्रक के लिफाफे की सील खोलने पर परीक्षार्थी यह सुनिश्चित कर लें कि उसके प्रश्न–पत्र पुस्तिका पर वही सीरीज अंकित है जो उत्तर पत्रक पर अंकित है। इसमें कोई भिन्नता हो तो वीक्षक से प्रश्न–पत्र की ही सीरीज वाला दूसरा प्रश्न–पत्र का लिफाफा प्राप्त कर लें। ऐसा न करने पर जिम्मेदारी अभ्यर्थी की होगी।
8. मोबाईल फोन अथवा इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित हैं। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।
9. कृपया अपना रोल नम्बर ओ.एम.आर. पत्रक पर सावधानी पूर्वक सही भरें। गलत अथवा अपूर्ण रोल नम्बर भरने पर 5 अंक कुल प्राप्तांकों में से अनिवार्य रूप से काटे जाएंगे।

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराई जायेगी और आर. पी. ई. (अनुचित साधनों की रोकथाम) अधिनियम, 1992 के नियम 3 के तहत कार्यवाही की जायेगी। साथ ही आयोग ऐसे अभ्यर्थी को भविष्य में होने वाली आयोग की समस्त परीक्षाओं से विवर्जित कर सकता है।

02 02

1 The crank case of many diesel engines are kept under a slight vacuum to
(1) Improve fuel economy
(2) Improve air charge velocity
(3) Reduce the risk of crank case explosion
(4) All of the above

2 Engine operating conditions may be indicated by the colour of exhaust smoke. Black smoke could indicate
(1) Insufficient speed droop setting
(2) Overloaded engine
(3) Clogged drain holes in the oil control rings
(4) Complete combustion

3 In a normally operating diesel engine the main source of lubricating oil contamination in the crank case is a result of the
(1) Metal particles loosened by wear
(2) Condensation of water vapours
(3) Break down of the lubricating oil itself
(4) Fuel dilution

4 The bore and stroke of the cylinder of a six cylinder engine working on an Otto cycle are 17cm and 30 cm respectively, total clearance volume is 9225 cm^3, and then what is the compression ratio ?
(1) 7.8 (2) 6.2
(3) 15.8 (4) 5.4

5 Which of the following symptoms shows that the combustion is necessarily complete ?
(1) Presence of free carbon in exhaust
(2) Presence of CO in exhaust
(3) Presence of Oxygen in exhaust
(4) Presence of Nitrogen in exhaust

6 What is the purpose of supercharging an engine ?
(1) To increase the power output
(2) To reduce specific fuel consumption
(3) To reduce the noise of the engine
(4) To improve cooling of cylinders

7 Consider the following :

1. Catalytic convertor
2. Use of high compression ratio
3. Oxidation catalyst in the exhaust manifold
4. Use of high degree of supercharger

By which of these techniques, can the oxides of nitrogen in the exhaust be controlled ?

(1) 1 only (2) 2 and 4 only
(3) 2, 3 and 4 only (4) 1, 2, 3 and 4

8 Which phenomenon has the most adverse effect on volumetric efficiency when engine works at high speeds ?

(1) Flow friction and choking
(2) Ram effect and chocking
(3) Flow friction and charge heating
(4) Charge heating and back flow

9 Consider the following :

1. Increased cetane number
2. Increased compression ratio
3. Increased injection advance
4. Increased air turbulence

Which of the factors will reduce the physical delay in diesel engine?

(1) 1, 2 and 3 only (2) 2 and 4 only
(3) 2, 3 and 4 only (4) 1, 2, 3 and 4

10 Consider the following factors :

Diesel engine knock can be reduced by increasing

1. Engine speed 2. Compression ratio
3. Degree of supercharge 4. Injection advance

Which of the statements is/are true?

(1) 1, 2 and 3 only (2) 2 and 3 only
(3) 1, 3 and 4 only (4) 2 only

11 When does ignition initiates in a Spark Ignition Engine ?
(1) Immediately after spark
(2) Immediately after completion of physical and chemical delay
(3) Immediately after the completion of Ignition lag
(4) just after completion of flame propagation

12 If the evaporator temperature of a plant is lowered keeping the condenser temp. constant, the power input of compressor required will be
(1) same (2) more
(3) less (4) unpredictable

13 Where does the lowest temp occur in a vapor compression cycle ?
(1) condenser (2) evaporator
(3) compressor (4) drier

14 1 ton of refrigerant is
(1) the SI unit used in refrigeration problem
(2) the cooling effect produced by melting 1 ton of ice
(3) the refrigeration effect to freeze 1 ton of water at 0°C into ice at 0°C in 24 hrs.
(4) the refrigeration effect to produce 1 ton of ice at NTP condition

15 Which of the following refrigerant has the highest critical point pressure ?
(1) Freon-11 (2) Freon-12
(3) Freon-22 (4) Ammonia

16 A hermetically sealed unit implies
(1) Compressor motor is sealed
(2) Compressor is sealed
(3) Refrigerant cycle is sealed
(4) Compressor and motor are sealed

17 An evaporator pressure regulator performs the following function
(1) Monitors evaporator temp
(2) Maintains compressor inlet pressure
(3) Keeps pressure up for system needs
(4) All of these

18 The conditioned air supplied to the room must have the capacity to take up
(1) Room sensible heat load only
(2) Room latent heat only
(3) Both room sensible heat and latent heat loads
(4) None of the above

19 The relative humidity during sensible cooling process
(1) increases (2) decreases
(3) remains same (4) unpredictable

20 Piston rings are made of
(1) cast iron (2) brass
(3) aluminium (4) spring steel

21 The addition of iron oxide to the foundry sand improves the
(1) Bonding (2) Green strength
(3) Hot strength (4) Permeability

22 Surface finish of casting depends upon
(1) Mould dressing (2) Pattern finish
(3) Sand compactness (4) All of the above

23 Core prints are used for
(1) Strengthen core
(2) Form seat to support and hold the core in place
(3) Fabricate core
(4) None of the above

24 In drawing operation the metal flows due to
(1) Ductility (2) Work hardening
(3) Plasticity (4) Shearing

25 Mass production on metallic cans are usually done by
(1) embossing (2) coining
(3) spinning (4) drawing

26 An important product manufactured by rolling is
(1) I-section (2) Tubes
(3) Metal Rolls (4) Rollers

27 A diamond locating pin is used in Jigs and Fixture because
(1) Diamond is very hard and wear resistant
(2) It occupies very little space
(3) It helps in assembling with tolerance on center distance
(4) It has a long life

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28 Bench vice is an example of
(1) Jig (2) Fixture
(3) Locator (4) Clamping device

29 Surging basically implies
(1) Unsteady periodic and reversed flow
(2) Forward motion of axial speed above sonic velocity
(3) The surging action due to the blast of air produced in compressor
(4) Forward movement of aircraft

30 A centrifugal pump is started with the delivery valve kept
(1) fully open (2) fully closed
(3) partially open (4) 50% open

31 Water hammer in pipes is due to
(1) excessive leakage of flowing fluid
(2) bursting of pipe under high pressure
(3) sudden stoppage of flow by the closure of a valve
(4) hitting of pipe with hammer

32 Unit of Kinematic viscosity is
(1) m/sec^2 (2) m^2/sec
(3) m/sec (4) m^2/sec^3

33 Hydrodynamic and thermal boundary layer thickness is equal when Prandtl number
(1) =0 (2) <1
(3) =1 (4) >1

34 In a steam power plant the ratio of isentropic heat drop in the prime mover to the amount of heat supplied per unit mass of steam is known as
(1) Stage efficiency (2) Degree of reaction
(3) Rankine efficiency (4) Relative efficiency

35 If heat and mass transfer take place simultaneously, the ratio of heat transfer coefficient to the mass transfer coefficient is a function of the ratio of
(1) Schmidt and Reynolds number
(2) Schmidt and Prandtl numbers
(3) Nusselt and Lewis numbers
(4) Reynolds and Lewis numbers

36 Which one of the following properties is more sensitive to increase in strain rate ?
(1) Yield strength (2) Proportional Limit
(3) Elastic Limit (4) Tensile Strength

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37 A mass is suspended at the bottom of two springs in series having stiffness 10N/mm and 5N/mm. The equivalent spring stiffness of the two springs is nearly

(1) 0.3N/mm (2) 3.3N/mm
(3) 5N/mm (4) 15N/mm

38 Critical speed of the shaft is affected by

(1) diameter and eccentricity of the shaft
(2) span and eccentricity of the shaft
(3) diameter and span of the shaft
(4) span of the shaft

39 Which one of the following tolerances set on inner diameter and outer diameter respectively of headed jig bush for press for correct fit ?

(1) G7h6 (2) F7n6
(3) H7h6 (4) F7j6

40 Clausius- Clapeyron equation gives the slope of a curve in

(1) p-v diagram (2) p-h diagram
(3) p-T diagram (4) T-S diagram

41 Stability of freely falling object is assured if its centre of

(1) Buoyancy lies below its centre of gravity
(2) Gravity coincides with its centre of gravity
(3) Gravity lies below its meta centre
(4) Buoyancy lies below its meta centre

42 The maximum shear stress occurs on the outer most fibers of a circular shaft under torsion. In a close coiled helical spring the maximum shear stress occurs on the

(1) Outermost fibers (2) Fibers at mean diameter
(3) Innermost fiber (4) End coils

43 In a single reduction, a large velocity ratio is required. The best transmission is

(1) Spur gear drive (2) Helical gear drive
(3) Bevel gear drive (4) Worm gear drive

44 Concepts in "Total Quality Management (TQM)" are attributed to

(1) George Dantzig (2) Taiichi Ohno
(3) W. Edwards Deming (4) Henry Ford

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45 To compete on speed, a company must
(1) produce a single product
(2) centralize all operations
(3) use only one supplier
(4) have quick feedback mechanisms

46 A product has MTBF of 200 hours and a MTTR of 10 hours. What is its system availability ?
(1) .048 (2) .050
(3) .952 (4) 1.050

47 Which of the following characteristics is *not usually* associated with batch production ?
(1) products made to customer order
(2) low volume
(3) stable, predictable demand
(4) general purpose equipment

48 What is the break-even point for the following situations: Fixed cost of product Rs 2000; variable cost of product Rs 5; price per unit Rs 10 ?
(1) 4 units (2) 40 units
(3) 400 units (4) 1000 units

49 A relationship diagram is
(1) a format for displaying manager's preferences for department locations
(2) a schematic diagram that uses weighted lines to denote location preference
(3) a type of schematic layout diagram that includes space requirements
(4) a network that describes restrictions on the order in which work elements must be performed

50 Which of the following statements concerning a Gantt chart is true ?
(1) Gantt charts are particularly helpful for scheduling and planning large projects.
(2) Gantt charts are particularly helpful for scheduling and planning projects with complex precedence relationships.
(3) The Gantt chart has been a popular project scheduling tool, but is not widely used now.
(4) The Gantt chart indicates where extra time is available and activities can be delayed.

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51 With the PERT approach, the variance of the total project completion time is calculated by
(1) adding all the individual activity variances together
(2) adding all the individual activity variances not on the critical path
(3) adding all the individual activity variances on the critical path
(4) choosing the largest variance that occurs from the pool of individual activity variances

52 Which of the following is true concerning the weighted moving average ?
(1) The oldest data will generally be given the greatest weight.
(2) If the weighted moving average forecast is 57.3, then the final forecast must be rounded up to 58.
(3) If the most recent periods are too heavily weighted, the forecast might overreact.
(4) The weighted moving average is usually more accurate than a simple moving average.

53 For a company that uses a periodic inventory system, which of the following is true ?
(1) inventory is counted only at specific time intervals
(2) the order is for a fixed quantity which minimizes inventory costs
(3) the inventory system is also referred to as a perpetual inventory system
(4) the company is using a fixed-order-quantity system

54 Which of the following statements concerning the basic EOQ model is true ?
(1) A decrease in demand will increase the EOQ value.
(2) If an actual order quantity is smaller than the EOQ, the annual holding cost is less than the annual ordering cost.
(3) An increase in holding cost will increase the EOQ value.
(4) In the EOQ formula there is an inverse relationship between setup and carrying costs.

55 For a company with an average daily demand of 9 units and a standard deviation of 3 units, a 9-day lead time, and a 95% service level, which of the following statements is true ?
(1) The reorder point is about 81 units
(2) The safety stock is about 15 units
(3) The reorder point is about 96 days
(4) The reorder point is about 81 days

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56 Which of the following is *not* a basic element of the JIT production system ?

(1) cellular layouts

(2) push production system

(3) small-lot production

(4) flexible resources

57 Maintenance that involves a system of periodic inspection and maintenance designed to keep a machine in operation is called

(1) preventive maintenance

(2) total productive maintenance

(3) predictive maintenance

(4) breakdown maintenance

58 Which of the following heuristics in a one-machine shop will always minimize flow time and average number of jobs in the system ?

(1) SPT

(2) DDATE

(3) CR

(4) FCFS

59 All of the following are considered nonproductive activities relating to equipment *except*

(1) setting up or breaking down a machine

(2) maintaining the machine

(3) waiting for workers or material

(4) all of the above are nonproductive activities

60 Whose book, entitled *Quality is Free*, emphasized the cost of quality ?

(1) Walter Shewhart

(2) Phillip Crosby

(3) W. Edwards Deming

(4) Joseph Juran

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61 Which of the following is not true concerning the ISO 9000 ?
(1) The ISO 9000 committee establishes generic quality standards for manufacturing firms worldwide.
(2) The ISO 9000 committee is a government organization that is a subset of the United Nations.
(3) The ISO 9000 is a guide for using the other four standards in the series 9001 through 9004.
(4) The ISO 9000 does not tell management how to meet requirements but does indicate what is required.

62 A p-chart has been prepared. Computations show that the average proportion defective is .032, while the standard deviation is .0176. From this data, what are the 3-sigma control limits for this chart ?
(1) LCL=.032 UCL=.085
(2) LCL=.053 UCL=.032
(3) LCL = 0 UCL=.085
(4) not enough information to determine the control limits

63 A part has a length specification of 2 mm with tolerances of ± .03 mm. The current process has an average length of 2.01 mm with a standard deviation of .02 mm. What is the value of the C_{pk} ratio ?

(1) .167
(2) .333
(3) .500
(4) 1.333

64 For a facility with an average arrival rate of 45 units per hour and a service rate of 60 units per hour, with a maximum system size of 3 units, which of the following statements is true ?
(1) The probability the system is full is .63
(2) The average number of units waiting to be served and being served is 1.15 units
(3) The average time a unit spends waiting to be served is 1.8 minutes
(4) The average number of units waiting to be served is .64 units

65 A company wishes to determine the proportion of time workers are idle. Using work sampling, the idle time during 150 observations is 26%. If the company wants a 95% confidence interval, how many more observations are needed if the company wants to be within +/-4% of the true proportion ?
(1) 9 observations
(2) 150 observations
(3) 312 observations
(4) 462 observations

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66 In decision theory, "expected value of perfect information" is the
(1) average expected payoff
(2) value of a decision given perfect information
(3) value of a decision without perfect information
(4) maximum value a decision maker is willing to pay to purchase perfect information

67 Which of the following criteria would a company that produces electronic equipment and components likely consider most important for location analysis ?
(1) land and construction costs
(2) availability of skilled workers
(3) transportation costs
(4) proximity to raw materials

68 Which of the following location analysis techniques involves a method of evaluating different locations based on the load being transported and the distance ?
(1) load-distance technique (2) location factor rating
(3) center-of-gravity technique (4) transportation model

69 A linear programming model is an example of a
(1) probabilistic model (2) deterministic model
(3) graphic model (4) physical model

70 The term which reflects an acceptable proportion of defects in a lot to the consumer is ?
(1) AOQ (2) LTPD
(3) OC (4) AQL

71 While machining which of the following improves surface finish ?
(1) Increased depth of cut
(2) Increased feed rate
(3) Increased cutting speed
(4) Formation of built-up edge

72 At what rpm should a lathe be run to give a cutting speed of 20 m/min when turning a rod of diameter 40 mm ?
(1) 100 rpm (2) 160 rpm
(3) 200 rpm (4) 250 rpm

73 Petrol engine carburetors are manufactured by
(1) Sand casting (2) Centrifugal casting
(3) Shell casting (4) Die casting

74 Which of the following cast iron is resistant to attack by sea water ?
(1) Low chromium cast iron (2) Low nickel cast iron
(3) Low sulphur cast iron (4) Low phosphorous cast iron

75 The coolant generally used while machining with carbide tools is
(1) Kerosene (2) Water
(3) Soluble oil (4) Graphite

76 Among the following, which material is having highest machine-ability ?
(1) Cast iron (2) Mild steel
(3) High carbon steel (4) Aluminium

77 Which of the following qualifies as a precision casting process ?
(1) Ingot casting (2) Investment casting
(3) Sand casting (4) Shell molding

78 Which of the following terms best describes cemented carbide ?
(1) Ceramic (2) Cermet
(3) Composite (4) Metal

79 Hot working of metals refers to which one of the following temperature regions relative to the melting point (Tm) of the given metal on an absolute temperature scale ?
(1) Room temperature (2) 0.2 Tm
(3) 0.4 Tm (4) 0.6 Tm

80 In a turning operation, the change in radius of the work part is equal to which one of the following ?
(1) 1 × depth of cut (2) 2 × depth of cut
(3) 1 × feed (4) 2 × feed

81 Which of the following abrasive materials is most appropriate for grinding hardened tool steel ?
(1) Aluminium oxide (2) Cubic boron nitride
(3) Diamond (4) Silicon carbide

82 Of the following processes, which one is noted for the highest material removal rates ?
(1) Electric discharge machining
(2) Electrochemical machining
(3) Laser beam machining
(4) Plasma arc cutting

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83 Which of the following are advantages of die casting over sand casting ?
(1) Higher melting temperature metals
(2) Higher production rates
(3) Larger parts can be cast
(4) Mold cannot be reused

84 Which of the following processes for the new ceramic materials accomplishes shaping and sintering simultaneously ?
(1) Doctor-blade process (2) Freeze drying
(3) Hot pressing (4) Injection molding

85 Which of the following abrasive materials is most appropriate for grinding steel and cast iron ?
(1) Aluminium oxide (2) Cubic boron nitride
(3) Diamond (4) Silicon carbide

86 Seamless tubes are made by
(1) piercing operation (2) hot forging
(3) power rolling (4) none of the above

87 In electro-chemical milling operation, the gap between tool and work kept is of the order of
(1) No gap (2) 0.25 mm
(3) 0.75 mm (4) 1.25 mm

88 The cutting tool used in the spark erosion machining process is called
(1) Arc (2) Capacitor
(3) Electrode (4) Dielectric

89 Gear teeth vernier is used to measure
(1) Circular pitch (2) Depth of tooth
(3) Tooth thickness (4) Pitch line thickness

90 In blanking operation, the angle of shear is given on
(1) Punch (2) Die
(3) Both punch and die (4) None of the above

91 Drilled holes and honed holes could be designated by which of the following grades ?
(1) H_5, H_{11} (2) H_6, H_{10}
(3) H_8, H_6 (4) H_{10}, H_5

92 The processes are commonly used for producing powder
(1) Atomization (2) Reduction Process
(3) Electrolytic process (4) All of the above

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93 What else does hydrogen fuelled fuel cell produce other than heat and electricity ?
(1) Carbon dioxide (2) Pure water
(3) Nitric acid (4) Natural gas

94 Centralised collection device for generating power from the Sun is called
(1) Fuel cell (2) Power tower
(3) Solar collector (4) Solar photovoltaic

95 The future growth of large scale hydro power plants in the developed world probably will be limited because
(1) the release of impounded water alters stream flow patterns
(2) most economical sites are already used
(3) reservoirs eventually fill with sediments
(4) all of the above

96 The nodal agency for coordinating the energy conservation activities under EC act in India is
(1) Bureau of Indian Standards
(2) Bureau of Energy Efficiency
(3) Bureau of Energy Education
(4) Bureau of Energy and Environment

97 What type of energy is derived from heated ground water ?
(1) Solar energy (2) Geo-thermal energy
(3) Nuclear energy (4) OTEC

98 Important waste management techniques
(1) Disposal-biodegradable (2) Recycling
(3) Landfills (4) All of the above

99 An electric heater is left on for 30 minutes. During this time it uses 1200 W of electric energy. The total cost of the electricity will be if electricity costs 7 paisa per kWh
(1) 252 paisa (2) 25200 paisa
(3) 4200 paisa (4) 4.2 paisa

100 What two gases are typically combined in a fuel cell ?
(1) Hydrogen and nitrogen (2) Hydrogen and oxygen
(3) Oxygen and nitrogen (4) Helium and nitrogen

02

SPACE FOR ROUGH WORK

02

LECTURER (TECHNICAL EDUCATION DEPT.) - 2012 **14/08/2013**

PAPER CODE (02) MECHANICAL ENGINEERING

SET_A	RES
1	4
2	2
3	*
4	4
5	3
6	1
7	1
8	1
9	*
10	2
11	3
12	2
13	2
14	3
15	4
16	4
17	4
18	3
19	1
20	1
21	3
22	4
23	2
24	1
25	4
26	1
27	3
28	*
29	1
30	2
31	3
32	2
33	3
34	3
35	2
36	*
37	2
38	3
39	*
40	*
41	*
42	3
43	4
44	3
45	*

SET_A	RES
51	3
52	*
53	1
54	2
55	2
56	2
57	1
58	1
59	*
60	2
61	2
62	3
63	2
64	2
65	*
66	4
67	2
68	*
69	2
70	4
71	3
72	2
73	4
74	*
75	*
76	4
77	2
78	2
79	4
80	1
81	2
82	4
83	2
84	3
85	4
86	1
87	2
88	3
89	4
90	2
91	*
92	4
93	2
94	2
95	4

46	*
47	3
48	3
49	*
50	3

96	2
97	2
98	4
99	4
100	2

NOTE : * MEAN DELETED