

17531

11819

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Preferably, write the answers in sequential order.

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| 1. (A) Attempt any THREE : | 12 |
| (a) Describe industrial ventilation with neat sketch. | |
| (b) Describe method to purify polluted water. (any one) | |
| (c) State the type of system generally adopted for the generation & transmission of electric power. Justify your answer. | |
| (d) State the importance of industrial lighting. | |
| (B) Attempt any ONE : | 6 |
| (a) Describe the importance of maintenance and give its types. | |
| (b) Compare breakdown & preventive maintenance. | |
| 2. Attempt any FOUR : | 16 |
| (a) Define : scheduled maintenance. State its necessity. | |
| (b) Explain in detail 'repair cycle'. | |
| (c) Explain the importance of maintenance manual for any machine component. | |
| (d) Describe machine history chart. State its significance. | |
| (e) Describe in brief TPM. | |
| 3. Attempt any FOUR of the following : | 16 |
| (a) State the benefits of Total Productive Maintenance. | |
| (b) Enlist the pillars of TPM. | |

- (c) Explain maintenance job responsibility allocation process used in total productive maintenance.
 - (d) Differentiate between Adhesive wear and Corrosive wear.
 - (e) Enlist the different properties of lubricants.
- 4. (A) Attempt any THREE :** **12**
- (a) Explain observed wear behaviour due to primary wear process
 - (b) List the different equipments required for electrical maintenance. State the use of circuit breaker.
 - (c) State the use of Ammeter and Voltmeter in electrical maintenance.
 - (d) State the various precautions taken against electric shock.
 - (e) Explain the procedure to select lubricants.
- (B) Attempt any ONE :** **6**
- (a) List the necessary steps for prevention of fire due to electricity.
 - (b) Define electrical accident. State causes & effects.
- 5. Attempt any FOUR :** **16**
- (a) Explain lever controlled reversal mechanism with sketch.
 - (b) List different personal protective equipments required during accident. Describe any one.
 - (c) Describe travel control by limit switches.
 - (d) Describe fool proofing devices for interlocking shafts at right angle with neat sketch.
 - (e) Define first aid. State it's importance.
- 6. Attempt any TWO :** **16**
- (a) Prepare preventive maintenance schedule of any one machine of your choice.
 - (b) Explain in brief the following :
 - (i) Centralized lubrication system
 - (ii) Allocation of job responsibility in TPM.
 - (c) Define standby and emergency power. Explain the schemes used with neat sketch.
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