



C14-EE-504

4636

**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DEE-FIFTH SEMESTER EXAMINATION**

INDUSTRIAL DRIVES

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

- Instructions :**
1. Answer **All** questions.
 2. Each question carries **THREE** marks
 3. Answer should be brief and straight to the point

1. State the any four factors governing the selection of motor.
2. Define the electric drive.
3. List any six types of enclosures.
4. Define regenerative braking and give its merits.
5. List various types of electrical braking.
6. Write few lines about Dynamic breaking.
7. List any six domestic applications of an electric drive.
8. Select suitable drive for the following
(i) Vacuum cleaner (ii) Mixer (iii) Air Conditioner
9. List out any six industrial applications of an electric drive.
10. Select the suitable motor used to the following.
(a) Floor mills (b) Punches & Presses (c) Printing

PART-B

10X5=50

Instructions *

1. Answer any **five** questions.
 2. Each question carries **ten** marks.
 3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer
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11. A motor has following duty cycle a load of 100HP for 10 minutes, no load for 5 minutes, 60HP for 8 minutes, no load for 4 minutes which repeats indefinitely. Determine suitable size of a continuously rated motor and draw the load curve.
 12. Explain the methods adopted to reduce the noise.
 13. Derive an expression for the temperature rise of equipment in terms of the heating time constant.
 14. Explain regenerative braking applied to D.C shunt motor.
 15. A 25HP, 220V DC shunt motor with a full load speed of 600 RPM is to be braked by plugging. Estimate the value of resistance which should be places in series with it to limit the current to 130A. what should be the initial value of the electric breaking torque and value when speed has fallen to half its full load value? Armature resistance of motor is 0.1 ohm, full load armature current is 95A.
 16. Explain the dynamic braking of a DC series Motor. Write the expression for the braking toque.
 17. (a) Explain the working of a refrigerator.
(b) Explain the working principle of continuous cold rolling mill.
 18. Explain the in detail about the working of belt conveyers with suitable drives.
