

4418**BOARD DIPLOMA EXAMINATION, (C-14)****MARCH /APRIL-2019****DAEIE - FOURTH SEMESTER EXAMINATION****INDUSTRIAL ELECTRONIS & CONTROL SYSTEMS**

Time: 3Hrs]

[Max. Marks: 80

PART-A**10x3=30M**

Instructions: 1) Answer **all** questions. Each question carries **three** marks
2) Answer should be brief & straight to the point and shall not exceed five simple sentences.

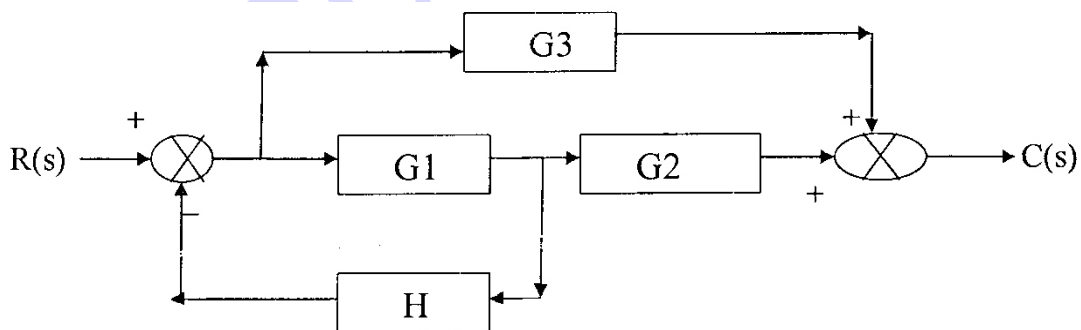
- 1) List the applications of opto couplers.
- 2) Draw the diagram of photo multiplier.
- 3) Classify various industrial electrical heating methods.
- 4) List the advantages of Induction Heating.
- 5) State the need for feedback in a control system and list the types of feed back.
- 6) Define Transfer function.
- 7) List the elements used in mechanical translational system.
- 8) Define Laplace transform.
- 9) Distinguish between type and order of a system.
- 10) List any three test signals used in control system.

PART - B

10x5=50M

Instructions: 1) Answer any **five** questions. Each question carries **ten** marks
2) Answer should be comprehensive and the criteria for valuation is the content but not the length of the answer

- 11) a) Explain the constructional details and working of a solar cell. 7M
b) List the applications of a solar cell. 3M
- 12) Explain the working of high frequency power source for Dielectric Heating with circuit diagram.
- 13) a) Explain the principle of Induction heating with a sketch.
b) Explain the basic circuit of AC resistance welding.
- 14) a) Explain about closed loop control system with an example
b) Write a short note on continuous data and sample data system.
- 15) Derive the transfer function of a thermal system.
- 16) Reduce the following block diagram and find $C(s)/R(s)$



- 17) a) Find the laplace transform of e^{at} . 5M
b) List the specifications of transient response of II order system. 5M
- 18) Obtain time response of I order system for step input.

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