

EVENING

Total No. of Questions: 09]

19 MAR 2021

[Total No. of Pages: 02]

Uni. Roll No.

Program: B.Tech. (Batch 2018 onward)

Semester: 3rd

Name of Subject: Education, Technology and Society

Subject Code: HSMEE -101

Paper ID: 16063

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

- 1) Parts A and B are compulsory
- 2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
- 3) Any missing data may be assumed appropriately

Part – A

[Marks: 02 each]

Q1.

- a) Illustrate the exact expression for the Solar Constant I_{sc} ?
- b) Differentiate between Technical and Commercial Losses (AT&C).
- c) Give the full forms of:- CEA and RFID
- d) Which form of energy is converted by a Photovoltaic cell?
- e) What are the major sources of Geothermal energy?
- f) What is the criminal practice of stealing electrical power known as?

Part – B

[Marks: 04 each]

- Q2. Illustrate the role of Gurukuls with respect to Indian Society.
- Q3. Differentiate in between direct, diffuse and total solar radiation. Draw a suitable diagram representing these type of solar radiation.
- Q4. List any five electrical safety precautions while working with an electrical equipment.
- Q5. Briefly explain the working of a Wind mill and give its 2 applications.
- Q6. Explain different approaches to learning techniques and scope of education in our nation?
- Q7. Discuss the significance of INDIAN ELECTRICITY GRID CODE-IEGC with block diagram.

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Part – C

[Marks: 12 each]

Q8. Explain any three Power theft control methods in detail.

OR

Write short notes on:-

- a) GIS system
- b) Health Hazards caused due to lack of awareness.
- c) Power scenario in rural India

Q9. With neat block diagrams, explain DC and AC Microgrid in detail.
Also give the applications of Microgrids.

OR

Write short notes on :

- a) Energy Conservation Building Code
- b) Hybrid Vehicles
