

Set - A

EEE202: Utilization of Electrical Energy

Quiz - 2 (MS 2023-24)

Date: 14/11/2023

Maximum Marks: 10

Time allowed: 30 minutes

Instructions:

- Carefully sign at the correct place in the attendance sheet.
- Clearly write your name and admission number and sign in the space provided.
- Any answer script without a name/admission number may not be evaluated.
- Write your answer only in the space provided. Answers written at any other place may not be evaluated.
- For a few fill-in-the-blank type questions, options are given within brackets immediately after the blank and separated by a '/'. The correct answer may be chosen from the given options.
- For multiple-choice questions, one or more than one option may be correct. Marks will be awarded only if all correct options are selected.
- Use space at the end of the question paper for rough work.
- This question paper consists of 20 questions of 0.5 marks each.
- Symbols used in this question paper have their usual meanings.

Admission Number: _____ Name: _____ Sign: _____

Q.1. Which of the following heating methods may use a high-frequency AC supply?

- | | |
|---|--|
| <input type="checkbox"/> Resistance heating | <input checked="" type="checkbox"/> Eddy current heating |
| <input type="checkbox"/> Arc heating | <input checked="" type="checkbox"/> Dielectric heating |

Q.2. Low-temperature heating chamber with provision of ventilation is termed as _____ (oven/furnace).

Q.3. An ideal heating element is one with _____ (high/low) temperature coefficient.

Q.4. Oxidation of graphite electrodes begins at a relatively _____ (higher/lower) temperature compared to the carbon electrodes.

Q.5. Temperature of charge in case of an indirect arc furnace is _____ (higher/lower) than that of in case of a direct arc furnace.

Q.6. When maximum power is delivered to an arc, the resistance of the arc is numerically equal to the _____ (resistance/impedance/reactance) of the whole electric circuit referred to the secondary excluding the arc resistance.

Q.7. Ajax Wyatt vertical core furnace is a type of _____ (indirect/direct) heating.

Q.8. High heat is obtained in dielectric heating by employing

- | | |
|--|---|
| <input checked="" type="checkbox"/> High-frequency | <input type="checkbox"/> Both high-voltage and high-frequency |
| <input type="checkbox"/> High voltage | <input type="checkbox"/> None of the given options |

Q.9. Resistance welding methods which produce coalescence at one or more particular spot(s) is/are:

- | | |
|--|--|
| <input type="checkbox"/> Butt welding | <input checked="" type="checkbox"/> Projection welding |
| <input checked="" type="checkbox"/> Spot welding | <input type="checkbox"/> Seam welding |

Q.10. Which of the following welding methods shield the weld from oxygen and nitrogen?

- | | |
|--|---|
| <input checked="" type="checkbox"/> Shielded metal arc welding | <input type="checkbox"/> Metal arc welding |
| <input checked="" type="checkbox"/> Submerged arc welding | <input type="checkbox"/> Carbon arc welding |

Q.11. Which of the following is/are the advantage(s) of electron beam welding?

- | | |
|---|--|
| <input type="checkbox"/> It is cheap. | <input checked="" type="checkbox"/> Shielding gas is not needed. |
| <input checked="" type="checkbox"/> It gives pure weld. | <input type="checkbox"/> None of the given options. |

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Q.12. Taps are usually provided on the _____ (**primary**/secondary) side of a welding transformer.

Q.13. Lux is a unit to measure the **Illumination** _____.

Q.14. Depreciation factor is the inverse of

☐ Waste light factor

☐ Utilization factor

☒ Maintenance factor

☐ Absorption factor

Q.15. The cross-section of the positive electrode in an arc lamp fed by a DC source is _____ (**more than**/less than/equal to) the cross-section of the negative electrode.

Q.16. The light spectrum of an incandescent lamp is _____ (**continuous**/discontinuous).

Q.17. Blackening of the lamp is least in _____ (vacuum/gas filled/**halogen**) incandescent lamp.

Q.18. The efficiency of a fluorescent lamp is close to _____ lumens per watt.

☐ 200

☒ 40

☐ 100

☐ 10

Q.19. The default position of the (bimetallic) contacts in a glow-type starter is _____ (closed/**open**).

Q.20. The operating power factor of a gaseous discharge lamp is improved by connecting

☐ A capacitor in series

☒ A capacitor in parallel

☐ An inductor in series

☐ An inductor in parallel

----- Space for rough work -----