**Subject: Utilization of Electrical Engineering**

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| 1 | If a 220 V heater is used on 110 V supply, the heat produced by it will be nearly    (a) one-half  (b) twice  (c) one-fourth  (d) four times |
| 2 | For heating non-conducting materials \_\_\_\_\_\_\_\_ is preferred    (a) eddy current heating  (b) arc heating  (c) dielectric heating  (d) induction heating |
| 3 | For spot welding electric supply used is  (a) low voltage high current  (b) high voltage low current  (c) low voltage low current  (d) high voltage high current |
| 4 | For transmission of heat from one body to another body  (a) temperature of the two bodies must be different  (b) at least one of the bodies must have some source of heating  (c) both bodies must be in contact  (d) both bodies must be solids |
| 5 | Furnaces used for cremation use  (a) resistance heating  (b) induction heating  (c) length of the fuse wire  (d) all of the above |
| 6 | Which of the following characteristics is not required for heating element?  (a) low temperature coefficient  (b) oxidation at high temperature  (c) high melting point  (d) high specific resistance |
| 7 | Long distance railways in India use  (a) 25 kV single-phase AC  (b) 3.3 kV single-phase AC  (c) 25 kV 3 phase AC  (d) 1500 V DC |
| 8 | When the speed of the train is estimated taking into account the time of stop at a station in addition to the actual running time between stops, is known as  (a) average speed  (b) schedule speed  (c) notching speed  (d) free running speed |
| 9 | Area under the speed –time curve represents  (a) net acceleration  (b) distance travelled  (c) average speed  (d) average acceleration |
| 10 | Which light has longer wavelength  (a) red  (b) blue  (c) green  (d) violet |
| 11 | Which of the following generators are used in arc welding?    (a) Shunt generators  (b) Series Generator  (c) Cumulative compound generators  (d) Differential compound generators |
| 12 | Which of the following is of high value in case of induction heating?    (a) Voltage  (b) Current  (c) Frequency  (d) All of the above |
| 13 | In case of induction hardening  (a) Heating occurs uniformly in the part to be heated  (b) Heating occurs in the core of the part to be heated  (c) Heating occurs in the center of the part to be heated  (d) Heating is more at the core and less on the surface of the part to be heated |
| 14 | Mica is a  (a) Insulating and dielectric material  (b) Dielectric material but not an insulator  (c) Insulating material but not dielectric  (d) Magnetic Material |
| 15 | If a furnace is to be heating to temperatures around 1500°C which of the following material for heating elements should be selected?  (a) Eureka  (b) Kanthal  (c) Platinium molybdenum carbo compound  (d) Nichrome |
| 16 | Which of the following characteristics is not required for heating element?  (a) High temperature coefficient of resistance  (b) Hugh ductility  (c) high melting point  (d) high specific resistance |
| 17 | Which motor is used in tramways?  (a) Capacitor start motor  (b) Single Phase synchronous motor  (c) DC series motor  (d) DC shunt motor |
| 18 | A freshly painted layer may be dried electronically by  (a) convective heating  (b) induction heating  (c) dielectric heating  (d) emissive heating |
| 19 | The excessive neutral current is caused by  (a) fans  (b) refrigerators  (c) electronic ballast  (d) coolers |
| 20 | In Argon arc welding, argon acts as a  (a) shield to protect work from getting oxidized  (b) filler material  (c) energy source  (d) flux |