TED (22) –1031 **REVISION– 2022**

FIRST YEAR KGCE EXAMINATION IN ELECTRICAL ENGINEERING

ELECTRICAL ENGINEERING-1 (TRADE THEORY)

MODEL QUESTION PAPER SET-1

(Time: 3 hours) (MaximumMarks:60)

PART-A

(There should be at least 3 questions from each module)

(MaximumMarks:20x1 Marks = 20 Marks)

I. Answerthefollowingquestionsbychoosingthecorrectanswerfromtheoptionsgivenbelow.
Each question carries 1 mark.

Q No	Question	Module
1	Safety of Electrical appliance are ensured by …….. a) Insulation b) Earthing c) Fuses d) All of the above	M 1.1
2	Identify the Fuse type  a)Knife edged cartridge fuse b)Screw type cartridge fuse c)Ferrule contact cartridge fuse_ d)High rupturing capacity fuse	M 1.4
3	Earth wires are made up of a)Copper b)Aluminium c)Iron c) Steel	M 1.7
4	Determine the resistance of a lamp drawing a current of 120mA when connected to a 12 V battery a) 100 Ω b)105 Ω c) 120 Ω d) 115 Ω	M 2.7
5	Identify the configuration which have the same voltage drop across each of its components a)Series b)Seriesparallel c)Parallel c) None of the above	M 2.5
6	Megger works on the principle of _____ a) Kirchhoff's current lawsb) ohm's law c) Gauss's lawd) electromagnetic induction	M 2.12
7	Which wiring can be done either on surface (or) on concealed in the wall? a) Cleat wiring b) Batten wiring c) PVC Conduit d)PVC Casing and Caping	M 3.1
8	What is the maximum power recommended to the light and fan sub circuit as per IE rules? a)3000 w b)1500 W c)800 W d)750 W	M 3.7

9	Identify the material with highest electrical conductivity a)Aluminium b)Copper c)Steel d)Silver	M 3.9
10	How the capacity of batteries is specified? a)Volt b)Watt c)Ampere hour d)Volt Ampere	M 4.1
11	Identify the output voltage of a dry cell a)1.2 V b)1.5 V c)1.8 V d)2.5 V	M 4.3
12	Which is used as an electrolyte in lead acid battery? a)Hydrochloric acid b)Ammonium Chloride c)Pottasium hydroxide d)Dilutedsulphuric acid	M 4.3
13	Two resistors are connected in series. If the voltage across each resistor is 5V,then the resultant voltage across the series combination is a) 5V b) 10V c) 0 d) 2.5V	M 2.5
14	The loop earth wire shall not be less than a)8 SWG b)10SWG c)12 SWG d)14 SWG	M 1.11
15	The emf induced in a coil due to change of flux produced by another coil is called a) Mutual induced emf b) Self-induced emf c)MMF d) Dynamically induced emf	M 2.20
16	Insulation resistance between conductors as IE rule should not be less than a)2 Mega ohm b)1 Mega Ohm c)o.5 Mega ohm d)1.5 mega ohm	M 3.7
17	Identify the wire which has greatest cross-sectional area a)8 SWG b)14 SWG c)22 SWG d)30 SWG	M 3.4
18	Identify the law applied in Electrolysis a) Ohms law b) Gauss's law c)Coloumb's law d) Faraday's law	M 4.3
19	Permanent magnets are made from which of the following materials a) soft iron b) Ferromagnetic c)Paramagnetic d) Diamagnetic	M 2.16
20	A 3 Ω resistance having 5 amperes will dissipate the power of a)10 W c)15 W c)12 W d)75 W	M 2.1

PART-B

(There should be at least 2 questions from each module)

(MaximumMarks: 8x5 Marks = 40 Marks)

II. Answer *any eight* questions from the following. Each question carries marks.5 Marks.

Q No	Question	Module
1	List any five electrical safety gadgets	M 1.14
2	Identify the factors affecting the earthing efficiency	M 1.7
3	Write any three comparisons of the circuit characteristics of series and parallel circuits with the help of figures.	M 2.5
4	Explain the working of Megger	M 2.12
5	Describe any two different types of wiring system	M 3.1
6	List any 4 properties of Aluminum and Copper each	M 3.9
7	Explain the procedure of testing the specific gravity of electrolyte	M 4.7
8	Differentiate primary and secondary cells with examples	M 4.1
9	Define the following terms 1) Actual power 2) Apparent power	M 2.30
10	Distinguish between star and delta connection with a neat sketch	M 2.27
11	Explain any one method of earthing in domestic application with a neat sketch	M 1.9
12	Summarize any fivecaring measures to be adopted for maintenance of lead acid battery	M 4.3