FYUGP Final Examination 2025

Skill Enhancement Course

(Physics Workshop Skill)

(SEC 0107803-N)

Time: 1.5 Hours **Full Marks: 30**

1. Answer the following questions 1x5=5

(i) CGS is stands for
(a) Centimetre Gram Second (b) Centigrade Gram Second
(c) Centimetre Gram Square (d) Centimetre Grade Second

(ii) A galvanometer is a device that is used to detect or measure the magnitude of
(a) small electric current (b) small electric voltage
(c) small electric potential (d) small electric flux

(iii) The alternating current (AC) supplied to households in India has a frequency of
(a) 60 Hz (b) 50 Hz
(c) 70 Hz (d) 90 Hz

(iv) Farad is a SI unit of
(a) electrical capacitor (b) electrical capacitance
(c) electrical conductance (d) electrical resistance

(v) Diode is used for
(a) rectifier (b) amplifier
(c) conductor (d) measuring current

2. Answer the following questions (*any five*) 2x5=10

(a) Define pitch and least count.
(b) Draw the symbols of resistor, capacitor, inductor and diode.
(c) Write the formula of radius of curvature using spherometer with notations.
(d) Draw the symbolic representation of PNP and NPN transistor with label.
(e) Write four uses of multimeter.
(f) Draw the full wave rectifier circuit.
(g) State the differences between DC and AC.

3. Answer the following questions (*any three*) 3x5=15

(a) Construct a neat circuit diagram with label to prove the Ohm's law.
(b) Write a short note on the utility of vernier calliper, screw gauge and spherometer.
(c) What is soldering? Write the difference between soldering and welding. Mention the name of four discrete components that are used to construct an electrical circuit.
(d) Write the Kirchoff's law in electricity. Mention the advantages of Kirchoff's law over Ohm's law.

*****