

NONCONVENTIONAL ENERGY SOURCES

Time : 3 Hrs.

3K-EGSN-12

Max. Marks : 100

Note:—

1. *Part 'A' may be attempted in first 5 pages of Answer Sheet.*
भाग 'क' के सभी उत्तर, उत्तर-पुस्तिका के प्रथम पांच पृष्ठों में ही करने हैं।
2. *Part 'B' may be attempted in rest of the Sheets of Answer Sheet.*
भाग 'ख' के उत्तर, उत्तर-पुस्तिका के अगले शेष पृष्ठों में लिखिये।
3. *Answers may be given in English or Hindi.*
प्रश्नों के उत्तर अंग्रेजी अथवा हिन्दी में दीजिये।

PART - A**1. Answer any ten questions.****(10 x 2 = 20)**

- (a) What is non-conventional energy?
- (b) Compare energy and power.
- (c) What is geothermal energy?
- (d) How does windmill works?
- (e) What is the cause of wind?
- (f) What is voltage regulator?
- (g) What is sea power?
- (h) What material is used for manufacturing solar cells?
- (i) What is biomass energy?
- (j) What is a Dam?
- (k) What are demerits of SHP?
- (l) What is fuel cell?
- (m) What are the risks involved in tidal energy?
- (n) Write full form of OTEC.

2. Answer any five questions.**(5 x 4 = 20)**

- (a) What are the various application of solar energy?
- (b) Explain various non conventional sources of energy harnessing.

- (c) Write short note on tidal energy generation.
- (d) Draw block diagram of control panel of wind energy and label it.
- (e) What are the limitations of solar energy?
- (f) Write constituents of biogas.
- (g) Write advantages of solar cell.
- (h) Draw block diagram of Photovoltaic system and label it.

PART - B

Answer any three questions.

(20 x 3 = 60)

- 3. With a neat diagram, explain various components of a SHP. Also write importance of SHP. (20)
- 4. (a) Explain solar water Pumping System. (10)
(b) Explain Protection of solar cell. (10)
- 5. What are various wave energy conversion devices? What is its potential and future in India? (20)
- 6. Draw a neat diagram of a biogas plant. Explain its working principle. What is its potential in India? (20)
- 7. Explain the process of geothermal energy extraction. What are its limitations and challenges? Enlist the geothermal plants in India. (20)