KADI SARVA VISHWAVIDHYALAYA

B.E. Semester VI Examination (Nov-2015)

Subject Code: - EE-601 **Subject Name: - Switchgear**

Date: - 02/11/2015 **Time: - 10:30am to 1:30pm** **Total Marks: - 70**

Instructions:

1. Answer each section in separate Answer Sheet.
2. Use of scientific calculator is permitted.
3. All questions are **Compulsory.**
4. Indicate **clearly,** the options you attempt along with it's with respective question number.
5. Use the last page of main supplementary of **rough work.**

Section – I

Q.1 **(A)** Explain the construction, working principle of Air Break Circuit Breakers. 5

(B) Write short note on minimum oil circuit breaker. 5

(C) Explain the arc formation process in circuit breaker. 5

OR

(C) State various Arc interruption theories and explain any one. 5

Q.2 **(A)** What are the different types of air blast circuit breaker? Also state the difference between them. 5

(B) Write a short note on the properties of oil used for circuit breaker. 5

OR

(A) Explain the D.C. Circuit Breakers. 5

(B) Advantages and disadvantages of Air Break Circuit Breakers. 5

Q.3 **(A)** Define (i) Breaking capacity (ii) rated symmetrical breaking current (iii) Restriking voltage 5

(B) What is Switchgear? Explain The Duties of Switchgear. 5

OR

(A) Advantages and disadvantages of SF6 Circuit Breakers. 5

(B) Explain advantages of air blast circuit breaker over the oil circuit breaker. 5

Section – II

Q.4 **(A)** Describe the construction operating principle and application of vacuum circuit breaker. 5

(B) Explain Tie bar system for connecting reactors with bus bar. 5

(C) Draw and Explain the Essential Parts of SF6 Circuit Breaker. 5

OR

(C) State the function of reactors and explain its working. Discuss their advantage. 5

Q.5 **(A)** Describe the construction operating principle of vacuum circuit breaker. 5

(B) Explain the properties of SF6 gas in recent developments of Circuit Breaker. 5

OR

(A) Compare SF6 and Vacuum Circuit Breaker. 5

(B) Discuss the principle of arc extinction in an oil circuit breaker. 5

Q.6 **(A)** Explain operating mechanism to open and close contact of circuit breaker. 5
(B) Explain Synthetic testing of Circuit Breaker & its limitation. 5

OR

(A) Give classification of Circuit Breakers. Describe Air-blast Circuit Breaker. 5

(B) Differentiate between Circuit breaker and Fuse and isolators. 5

KADI SARVA VISHWAVIDHYALAYA

B.E. Semester VI Examination (May-2015)

Subject Code: - EE-601 **Subject Name: - Switchgear**

Date: - 29/04/2015 **Time: - 10:30am to 1:30pm** **Total Marks: - 70**

Instructions:

1. Answer each section in separate Answer Sheet.
2. Use of scientific calculator is permitted.
3. All questions are **Compulsory.**
4. Indicate **clearly,** the options you attempt along with it's with respective question number.
5. Use the last page of main supplementary of **rough work.**

Section – I

Q.1 **(A)** Write a short note on the properties of oil used for circuit breaker. **5**

(B) Explain advantages of air blast circuit breaker over the oil circuit breaker. **5**

(C) Advantages and disadvantages of SF6 Circuit Breakers. **5**

OR

(C) What are the different types of air blast circuit breaker? Also state the difference between them. **5**

Q.2 **(A)** Explain the construction, working principle of Air Break Circuit Breakers. **5**

(B) Define (i) Breaking capacity (ii) rated symmetrical breaking current (iii) Restriking voltage **5**

OR

(A) What is Switchgear? Explain The Duties of Switchgear. **5**

(B) Advantages and disadvantages of Air Break Circuit Breakers. **5**

Q.3 **(A)** State various Arc interruption theories and explain any one. **5**

(B) Explain the arc formation process in circuit breaker. **5**

OR

(A) Write short note on minimum oil circuit breaker. **5**

(B) Explain the D.C. Circuit Breakers. **5**

Section – II

Q.4 (A) Explain operating mechanism to open and close contact of circuit breaker. 5

(B) Explain Tie bar system for connecting reactors with bus bar. 5

(C) Differentiate between Circuit breaker and Fuse and isolators. 5

OR

(C) Compare SF6 and Vacuum Circuit Breaker. 5

Q.5 (A) Describe the construction operating principle of vacuum circuit breaker. 5

(B) Explain the properties of SF6 gas in recent developments of Circuit Breaker. 5

OR

(A) Explain Synthetic testing of Circuit Breaker & its limitation. 5

(B) Discuss the principle of arc extinction in an oil circuit breaker. 5

Q.6 (A) Give classification of Circuit Breakers. Describe Air-blast Circuit Breaker. 5

(B) State the function of reactors and explain its working. Discuss their advantage. 5

OR

(A) Draw and Explain the Essential Parts of SF6 Circuit Breaker. 5

(B) Describe the construction operating principle and application of vacuum circuit breaker. 5