KC INSTITUTE OF ENGINEERING AND TECHNOLOGY, PANDOGA

SESSIONAL EXAMINATION

CLASS –CE/CSE

EE-507/ELECTIVE /NCEPG/CBCS

TIME ALLOWED: 2.00Hrs.

MAX.MARKS=30

NOTE- Each section carries equal marks. Attempt one question from each section. (Each question carries 6 marks)

SECTION-A

Q1. Discuss the functions of each components of a flat plate type solar collector with neat diagram

OR

Q2. Explain the concentrating type solar collector.

SECTION-B

Q3. What is wind? Explain in detail the basic principle of wind energy with a neat diagram?

OR

Q4. What is bio-gas? What are the factors which affect the bio- digestion?

SECTION-C

Q5. How bio-mass conversion takes place? Explain the process of photo-synthesis?

OR

Q6. Discuss in detail the anaerobic digestion process?

SECTION-D

Q7 Discuss and classify geo-thermal energy sources in detail?

OR

Q8. Discuss the future prospects of geo-thermal sources in context to India. Give the applications of geo-thermal energy

SECTION-E

Q9. a) Write the various types of solar energy collectors? Give the diagram of CPC type?

b) What is the function of wind rotor in the wind energy conversion?

c) Why PV cell is necessary in solar array? Give only diagram of PV cell energy generation?

(2+2+2)

END

K.C.G R.P.I PANDOGA, UNA

Subject: Computer Graphics (CS-503)

Semester- 5th CSE

Max Marks: 30 **MST-2**

Time: 2:00 hrs.

Note: All Sections are compulsory.

Attempt any one questions from section Aand B.Section C is compulsory

---

Section A (1*10=10)

Q1. Explain in detail various types of 3D display methods.

Q2.What is clipping operations?explain point clipping algorithm.

Section B (1*10=10)

Q3. Explain the following with neat and clean diagram:

(a) RGB color model

(b) CMY color model

Q4.Explain Bezier curves and surfaces or B-Spline curves and surfaces in detail.

Section C (2*5=10)

Q5. Define the followings:

(a) Curved lines and surfaces

(b) Composite transformation

(c) Window and view port

(d) Parallel and perspective transformation

(e) XYZ

K.C.G R.P.I PANDOGA, UNA

Subject: Artificial Intelligence & Expert System (CS-504)

Semester- 5th /CSE

Max Marks: 30

2 MST-

Time: 2:00 hrs

Note: All Sections are compulsory.

Attempt any one questions from section A and B.Section C is compulsory

---

Section A (1*10=10)

Q1.What is genetic algorithm?Explain genetic operators and working of genetic algorithm.

Q2.What is Back Propagation learning?Also explain the difference between single layer and multilayer.networks.

Section B (1*10=10)

Q3.Explain Hopfield network?Write down the key difference between forward reasoning and backward reasoning.

Q4.What is Expert system?also explain syntactic and semantic analysis

Section C (2*5=10)

Q5. Define the followings:

(a) ELIZA
(b) Forward chaining and Backward chaining
(c) Knowledge
(d) Boltzman machine
(e) Language Parsing

KC GROUP OF RESEARCH & PROFESSIONAL INSTITUTES, PANDOGA UNA (H.P)

SUBJECT NAME/SEM/BRANCH: SE/5TH/CSE
TIME: 2:00 HRS MAXIMUM MARKS: 30

Attempt Any One question from Section A,B & C. Section D & E is Compulsory

Section A

Q1Define Coding and explain the coding standards guidelines that are necessary for coding.

Q2 Define Testing and explain different types of testing. (1*5=5)

Section B

Q3 Explain COCOMO model in detail.

Q4 Explain the concept of project scheduling, project monitoring and control. (1*5=5)

Section C

Q5 Define Software Maintenance and its types,

Q6 Define Software reuse and reuse approach . (1*5=5)

Section D

Q7 Illustrate in Detail Software reverse engineering.

Q8 Difference between Client Server Software and SOA.
(2*5=10)

Section E

Q9 Define the terms: **a)**PSP **b)** Quality assurance **c)**Process quality **d)** SEI **e)** Software Configuration Management.
(5*1=5)

K.C.G R.P.I ,PANDOGA, UNA
ANALYSIS AND DESIGN OF ALGORITHM (CS- 506)
Semester- 5th /CSE

Max Marks: 30 **MST-2**
Time: 2:00 hrs.

Note: All Sections are compulsory.
Attempt any one question from section A, B & Cis compulsory

Section A (1*10)

Q1 Discuss in detail about the class P, NP, NP-hard and NP-complete problems. Give examples for each class.

Q2 Write and explain the Cooks theorem and also expalain ford Fulkerson for maximum flow networks .

Section B (1*10)

Q3 Describe Travelling Salesperson Problem (TSP)and job sequencing with deadline using greedy method.
Q4 Explain Prim's and kruskal 's algorithm for minimal spanning tree with an example.

Section C (2*5=10)

Q5. All questions are compulsory

(a) Cryptographic computation.
(b) Multicast routing.
(c) Sorting networks.
(d) BIN packing.
(e) Maximum Bipartile Matching.

K.C.G R.P.I ,PANDOGA, UNA

COMPUTER NETWORKS(CS- 501)

Semester- 5th /CSE

Max Marks: 30 MST-2

Time: 2:00 hrs.

Note: All Sections are compulsory.

Attempt any one question from section A, B & C is compulsory

Section A (1*10)

Q1 What is IPv6 addressing with frame format ? Explain difference between IPv4 and IPv 6 addressing?

Q2 Explain any two unicast static and multicast routing algorithms.

Section B (1*10)

Q3 What is architecture and working of 802.11 standard by IEEE.

Q4 What is working of IEEE 802.4 standard. Also explain the frame format.

Section C (2*5=10)

Q5. All questions are compulsory

(a) What is virtual LANs?
(b) What is connecting devices? Explain in brief.
(c) What is the purpose of HDLC protocol?
(d) What is FDDI?
(e) Point to point protocol.

K.C.G.R.P.I PANDOGA, UNA

Subject: Core Java (CS-502)

Semester- 5th/CSE

Max Marks: 30 **MST-2** **Time: 2:00 hrs.**

Note: All Sections are compulsory.
Attempt any three questions in all selecting at least one question from each section A, B, C and Section D is compulsory.

Section A (1*10=10)

Q1write a java program which contain frame as a container. Inside frame include component like image icon, label and button.
Q2write a short note on java applets. Discuss its life cycle with methods.

Section B (1*5=5)

Q3Explain life cycle of threads with example Also How to create a thread in java
Q4 write a java program to demonstrate exceptions.

Section C(1*5=5)

Q5 Discuss layout managers in detail with program.
Q6 write a note on java packages. what is the use of java.lang by explaining its methods.

Section D (2*5=10)

Q9. Explain the following in brief

a) D/f between throws & throw.
b) Significance of finally block in exceptional Handling
c) Difference b/w Swing and AWT.
d) Differentiate b/w checked & unchecked exceptions
e) what is Interface. Mention its uses.