



HBO-1184-85 Seat No. 121

B. C. A. (Sem. IV) Examination

April / May - 2015

1. BCA - 404 : Operating System
(Elective - II)
2. BCA - 404 : Computer Graphics
(Elective - II)

Time : 3 Hours]

[Total Marks : 70

**1. BCA - 404 : Operating System
(Elective - II)**

(64)

- 1 (a) Do as directed : 6
 - (i) What is operating system ?
 - (ii) Full form of : GUI and CUI.
 - (iii) What is Buffering ?
 - (iv) What is kernel ?
 - (v) List out the functions of O/S.
 - (vi) What is client - server model ?
- (b) Attempt the following : (any two) 12
 - (i) Explain any three types of operating systems.
 - (ii) What is monolithic system ? Explain layered systems of operating systems.
 - (iii) Explain microkernel in operating system.
- 2 (a) Do as directed : 5
 - (i) What is process ?
 - (ii) Define the term : Waiting time.
 - (iii) What is context switch ?
 - (iv) What is ready queue ?
 - (v) Define the term : CPU burst and throughput.

- (b) Attempt the following : (any two) 12
- (i) Explain process states in detail.
 - (ii) Explain FCFS scheduling algorithm with example.
 - (iii) Explain RR scheduling algorithm with example.

- 3 (a) Do as directed : 6
- (i) What is Thread ?
 - (ii) Define : Critical section.
 - (iii) What is multitasking ?
 - (iv) What is thread synchronization ?
 - (v) What are causes for deadlock ?
 - (vi) Define : Deadlock prevention.
- (b) Attempt the following : (any two) 12
- (i) What is semaphore ? Explain semaphore with its types.
 - (ii) Explain deadlock avoidance and deadlock detection method.
 - (iii) What is deadlock ? Explain the causes for deadlock.

- 4 (a) Do as directed : 5
- (i) What is memory Management ?
 - (ii) Define : Program Initiation.
 - (iii) What is swapping ?
 - (iv) What is ATU ?
 - (v) Define : Page fault.
- (b) Attempt the following : (any two) 12
- (i) What is segmentation ? Explain segmentation in detail.
 - (ii) Explain memory management schemes in detail.
 - (iii) What is Fragmentation ? Explain Fragmentation in detail.

2. BCA - 404 : Computer Graphics
(Elective - II)

- 1 (a) Do as directed : 6
- (i) What is Raster scan display ?
 - (ii) What is resolution ?
 - (iii) Define term pixel.
 - (iv) What is Random Scan display ?
 - (v) Full form : PNG
 - (vi) Full form : TIFF
- (b) Attempt the following : (any three) 12
- (i) Explain application of computer graphics.
 - (ii) Explain raster scan display in detail.
 - (iii) Explain input devices in detail.
 - (iv) Explain hard copy devices.
- 2 (a) Do as directed : 5
- (i) Define term boundary fill algorithm.
 - (ii) What is gray scale ?
 - (iii) Define cell array.
 - (iv) What is bundled ?
 - (v) Full form : WMF
- (b) Attempt the following : (any three) 12
- (i) Explain area-fill character attributes.
 - (ii) Explain point and lines.
 - (iii) What is anti-aliasing ? Explain all anti-aliasing technique.
 - (iv) Explain inside-outside test and give example.
- 3 (a) Do as directed : 6
- (i) What is shear ?
 - (ii) What is Reflection ?
 - (iii) What is 2-dimensional transformation ?
 - (iv) List out basic transformation in 2-D geometric transformation.
 - (iv) Define term scaling.
 - (v) FullForm : CAD

(b) Attempt the following : (any three)

12

- (i) Explain the rotation transformation.
- (ii) Explain scaling transformation.
- (iii) Explain rotation transformation.
- (iv) Explain shear and reflection.

4 (a) Do as directed :

5

- (i) What is clipping ?
- (ii) What is curve clipping ?
- (iii) Full form : WCS
- (iv) What is perspective projection ?
- (v) What is viewport ?

(b) Attempt the following : (any three)

12

- (i) Explain Text clipping.
 - (ii) Explain polygon clipping.
 - (iii) Explain the viewing pipeline.
 - (iv) Explain two-dimensional viewing function.
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