Data Compression
Objective Questions

1) The techniques for reducing the storage requirement of computer files and directory structure are known by which name ?
a) Data compression b) Data storage place c) Data form d) Data transfer

2) By using data compression technique, what can be done in the data storage place of memory and disk ?
a) increment **b) Reduction** c) Transfer d) Repetition

3) What process is done by the data compression while encoding the data ?
a) Identifying repetition in the data b) Reducing repetition in the data c) Eliminating repetition in the data **d) All of these**

4) Which technique identify and eliminate less important information to conserve space ?
a) Data compression b) Data repetition c) Data extension d) Data conservation

5) In data compression technique, each word is represented by what ?
a) Digit b) Letter **c) a or b** d) Picture

6) Where in the encoded file, one can have the data that tells which digit/letter represents which word ?
a) Beginning b) Middle c) Ending d) None of these

7) What is the reason that in the beginning of encoded file there is data telling which digit/letter represents which word ?
a) It is needed to convert the file in compression form b) it is needed to convert the file in encoded form **c) it is needed to convert the file in its original uncompressed form** d) it is needed to convert the file in graphical form

8) In the encoded file, how many time lengthy words appear ?
a) Not a single time **b) One** c) Infinite d) As specified

9) In the encoded file, which type of changes are made in sysmbols ?
a) They are compressed b) They are changed to a letter or symbol c) They are represented in the graphical form **d) No changes are made**

10) In the encoded file, which symbol is marked in the beginning ?
a) ^ b) & c) $ d) %

11) In the encoded file, which symbol is marked in the ending ?
a) ^ b) & **c) $** d) %

12) In the encoded file, by using which process it can be transformed into original file at any time ?
a) Straight **b) Reverse** c) Transfer d) Compressed

13) From the following for which process 'Archive Manager tool ' is used ?
a) For transferring the data of file and directory b) For place compression on the file and directory c) For altering the form of file and directory **d) For data compression on file and directory**

14) From the following, which file format stores multiple files in a single Zip file ?
a) zap **b) zip** c) zop d) zep

15) Using gzip program an uncompressed file in the tar format is compressed in the zip format, by providing which extension ?
a) tar b) tar.gz **c) tar.gz** d) zip

16) Which file in java uses zip compression?
a) JAR b) JER c) ZAR d) ZER

17) What is done firstly, to create a compressed and archive file into uncompressed ?
a) Left clicking a file -> Open with archive manager **b) Right clicking a file -> open with archive manager** c) Left clicking a file -> open with Winzip d) Right clicking a file -> open with winzip

18) Which button can be used in the Archive manager toolbar, to create a compressed file into uncompressed ?
a) Open button b) Home button **c) Extract** d) Up button

19) From the following, which option shows an issue faced with multimedia contents ?

a) Converting multimedia information coming from hardware devices into computer data b) converting the computer data back into audio/video streams for playing on the hardware device **c) a and b both** d) None of these
20) To convert multimedia information coming from hardware devices into computer data can be compared with which process ?
a) coding b) Decoding c) (a) and (b) both d) None of these

21) In the multimedia contents, which process is done by a software ?
a) Conversion (coding) b) Reverse conversion **c) (A) and (B) both** d) None of these

22) In the multimedia contents, coding and decoding is performed by a software component known as _____.
a) codec b) modec c) sodec d) bodec

23) The list of playing media file is known as _____.
a) medialist **b) playlist** c) masterlist d) filelist

24) What is the full form of M3U ?
a) MPEG user sound reference file b) MPEG Universal Sound reference file c) MPEG unified sound reference file **d) MPEG URL sound reference file**

25) Google maps service is provided by whom ?
a) Google corporation **b) Google incorporation** c) Google outcorporation d) Google newcormporation
26. An alphabet consist of the letters A, B, C and D. The probability of occurrence is P(A) = 0.4, P(B) = 0.1, P(C) = 0.2 and P(D) = 0.3. The Huffman code is

a. A = 01
B = 111
C = 110
D = 10
b. A = 0
B = 111
C = 110
D = 10
c.A = 0
B = 111
C = 11
D = 101

d.A = 0
B = 11
C = 10
D = 111

27. The basic idea behind Huffman coding is to
A. compress data by using fewer bits to encode fewer frequently occuring characters
B. **compress data by using fewer bits to encode more frequently occuring characters**
C. compress data by using more bits to encode more frequently occuring characters
D. expand data by using fewer bits to encode more frequently occuring characters

28. Huffman coding is an encoding algorithm used for
A. **lossless data compression**
B. files greater than 1 Mbit
C. broadband systems
D. lossy data compression

29. A Huffman encoder takes a set of characters with fixed length and produces a set of characters of
A. fixed length
B. constant length
C. random length
D. **variable length**

30. A Huffman code: A = 1, B = 000, C = 001, D = 01 ,P(A) = 0.4, P(B) = 0.1, P(C) = 0.2, P(D) = 0.3
The average number of bits per letter is
A. 8.0 bit
B. 2.0 bit
C. **1.9 bit**
D. 2.1 bit

31. The idea with wavelets is to represent a complicated function by
A. sinus functions
B. **simple basic functions**
C. lines
D. square functions

32. Down sampling is to make a digital image file smaller by
A. **removing pixels**
B. adding noise
C. adding pixels

D. removing noise

33. Without losing quality, JPEG-2000 can achieve compression ratios of

A. 20:1
B. 2000:1
C. 2:1
D. **200:1**

34. The best visual compression quality is achieved using

A. DCT
B. **Wavelets**
C. Dolby
D. Fourier transform

35. The two catagories of data compression methods are _____ and _____.(lossless and lossy)
36. Lossless compression preserves the _____ of the data exactly.(integrity)
37. In lossy compression, some of the data is ___ in the compression/decompression process.(lost)
38. Run length encoding is a compression method in which repeated _____ of a symbol are replaced.(occurance)
39. Lempel-Ziv encoding is a type of _____-based encoding.(dictionary)
40. Huffman coding uses the _____ of the characters in the file to construct a tree.(frequency)
41. In Huffman codes for each character with the ____ frequent characters having shorter codes than the less frequent characters.(more)
42. The dictionary in LZ encoding consists of _____ entries that refer to substrings in the original file.(indexed)
43. In Huffman encoding, both the sender and receiver must have a copy of the ___ Code.(same)
44. JPEG is used to compress _____.(image)
45. MPEG is used to compress_____.(video)
46. MPEG uses a method similar to JPEG to compress the individual _____of video.(frames)
47. Blocking is the act of dividing the image into 8 x 8 pixel _____in order to reduce the number of calculations.(blocks)
48. DCT changes the 64 pixel values in each _____so that the relative relationships between pixels are kept but the redundancies are revealed.(block)
49. Quantization of the T table _____the number of bits needed for encoding.(reduces)

50. A motion picture is a rapid flow of a set of ____where each frame is a picture.(frames)

51. **Huffman trees use the _____ of each character to work out their encoding.**

A. Frequency

B. Order in ASCII

C. Number value

52.How do you move through a Huffman tree?

A. 0 = right 1= left

B. 1 = left 2 = right

C. **0 = left 1 = right**

0 = middle 1 = back