ENTRANCE EXAMINATION FOR ADMISSION, MAY 2012.

M.B.A. (BANKING TECHNOLOGY)

COURSE CODE : 381

Register Number :

Signature of the Invigilator
(with date)

COURSE CODE : 381

Time : 2 Hours Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each of the question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you –1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

Synonyms:

1. Haughty
   (A) independent
   (B) customary
   (C) passion
   (D) arrogant

2. Irony
   (A) satire
   (B) seclude
   (C) envious
   (D) promise

3. Nimble
   (A) agile
   (B) heavy
   (C) thimble
   (D) sewing

4. Regret
   (A) woe
   (B) lackadaisical
   (C) tardy
   (D) ignore

5. Buxom
   (A) bookish
   (B) plump
   (C) voluminous
   (D) convincing

6. Candid
   (A) vague
   (B) outspoken
   (C) experienced
   (D) anxious

Antonyms:

7. Synchronous
   (A) off-key
   (B) out-of-shape
   (C) without pity
   (D) out-of-phase

8. List
   (A) be upside down
   (B) be upright
   (C) slide backward
   (D) sway to and fro

9. Tractable
   (A) distraught
   (B) irritating
   (C) ruthless
   (D) headstrong

10. Perfidy

(A) thoroughness (B) generosity

(C) gratitude (D) loyalty

11. Dissemble

(A) act conventionally (B) put together

(C) appear promptly (D) obtain readily

12. Artifice

(A) edifice (B) sincerity

(C) prejudice (D) creativity

Find Error in the following questions (13-18):

13. The fire spread quickly, destroy three houses within minutes.

(A) spread (B) quickly

(C) destroy (D) within

14. She crossed the road without looking and was knock down by a car.

(A) crossed (B) looking

(C) knock (D) by

15. He got out of the car, than he locked it and walked to the office.

(A) out (B) than

(C) locked (D) walked

16. I hope you will kind consider my application for a job in your company.

(A) hope (B) kind

(C) consider (D) job

17. If I know it was going to rain like this, I would have stayed at home.

(A) know (B) to rain

(C) would (D) at

18. To my opinion advertisements are more harmful than beneficial.

(A) to (B) opinion

(C) more (D) than

Comprehension:

The theory of plate tectonics describes the motions of the lithosphere, the comparatively rigid outer layer of the earth that includes all the crust and part of the underlying mantle. The lithosphere is divided into a few dozen plates of various sizes and shapes; in general the plates are in motion with respect to one another. A mid-ocean ridge is a boundary between plates where new lithospheric material is injected from below. As the plates diverge from a mid-ocean ridge they slide on a more yielding layer at the base of the lithosphere.

Since the size of the earth is essentially constant, new lithosphere can be created at the mid-ocean ridges only if an equal amount of lithospheric material is consumed elsewhere. The site of this destruction is another kind of plate boundary: a subduction zone. There one plate dives under another and is reincorporated into the mantle. Both kinds of plate boundary are associated with fault systems, earthquakes and volcanism, but the kinds of geologic activity observed at the two boundaries are quite different.

The idea of sea-floor spreading actually preceded the theory of plate tectonics. The sea-floor spreading hypothesis was fonnulated chiefly by Harry H. Hess of Princeton University in the early 1960s. In its original version it described the creation and destruction of ocean floor, but it did not specify rigid lithospheric plates. The hypothesis was soon substantiated by the discovery that periodic reversals of the earth's magnetic field are recorded in the oceanic crust. An explanation of this process devised by F.J. Vine and O.H. Matthews of Princeton is now generally accepted. As magma rises under the mid-ocean ridge, ferromagnetic minerals in the magma become magnetized in the direction of the geomagnetic field.

When the magma cools and solidifies, the direction and the polarity of the field are preserved in the magnetized volcanic rock. Reversals of the field give rise to a series of magnetic stripes running parallel to the axis of the rift. The oceanic crust thus serves as a magnetic tape recording of the history of the geomagnetic field. Because the boundaries between stripes are associated with reversals of the magnetic field that can be dated independently, the width of the stripes indicates the rate of sea-floor spreading.

(Precisely how the earth's magnetic field reverses at intervals of from 10,000 to about a million years continues to be one of the great mysteries of geology)

It follows from the theory of sea-floor spreading that many of the most interesting geologic features of the earth's surface are to be found on the ocean floor. The investigation of such features has been furthered in recent years by the development of deep-diving manned submersibles. In particular the U.S. research submersible *Alvin*, operated by the Woods Hole Oceanographic Institution, has proved to be a valuable tool for studies of the sea bed. A geologist in the *Alvin* can collect rock samples and document in detail the setting of each rock. For the first time a marine geologist can have maps of a site a precise as those of a geologist on land.

19. The author's primary purpose in the passage is to

(A) question established data
(B) describe current explorations
(C) trace the development of a theory
(D) propose an alternative solution

20. The passage would be most likely to appear in a

(A) congressional report advocating the continued funding of oceanographic studies

(B) geological research report focused on the likelihood of volcanism along coastal regions

(C) pamphlet designed to acquaint visitors to Woods Hole with the capabilities of deep-diving manned submersibles

(D) scientific journal article summarizing recent advances in applying plate tectonic theory to marine geology

21. According to the passage, a mid-ocean ridge differs from a subduction zone in that

(A) it marks the boundary line between neighboring plates

(B) only the former is located on the ocean floor

(C) it is a site for the emergence of new lithospheric material

(D) the former periodically disrupts the earth's geomagnetic field

22. It can be inferred from the passage that as new lithospheric material is injected from below

(A) the plates become immobilized in a kind of gridlock

(B) the new material is incorporated into an underwater mountain ridge

(C) the earth's total mass is altered

(D) the magnetic polarity of the new material is reversed

23. The passage contains information that would answer which of the following questions about the theory of sea-floor spreading and the history of the geomagnetic field?

I. What is the minimum known time span between reversals of the earth's magnetic field?

II. What mechanism is responsible for the magnetic field's changes in polarity?

III. Can the pace of sea-floor spreading be determined from current geomagnetic data?

(A) I only

(B) III only

(C) I and II only

(D) I and III only

24. It can be inferred from the passage that a large increase in the creation of new lithospheric material would result in

(A) at least a slight decrease in activity along the subduction zones

(B) at the most a slight increase in activity along the subduction zones

(C) a correspondingly large increase in activity along the subduction zones

(D) a cessation of activity along the subduction zones

25. According to the passage, lithospheric material at the site of a subduction zone

(A) rises and is polarized

(B) sinks and is absorbed

(C) slides and is injected

(D) spreads and is reincorporated

Mathematics:

26. What is the sum of all 3 digit numbers that leave a remainder of '2' when divided by 3?

(A) 897 (B) 164,850 (C) 164,749 (D) 149,700

27. Obtain the sum of all positive integers up to 1000, which are divisible by 5 and not divisible by 2.

(A) 10050 (B) 5050 (C) 5000 (D) 50000

28. The sum of the three numbers in A.P is 21 and the product of their extremes is 45. Find the numbers.

(A) 5, 7 and 9 (B) 9, 7 and 5

(C) Both (A) and (B) (D) None of these

29. A piece of equipment cost a certain factory Rs. 600,000. If it depreciates in value, 15% the first year, 13.5% the next year, 12% the third year, and so on, what will be its value at the end of 10 years, all percentages applying to the original cost?

(A) 2,00,000 (B) 1,05,000 (C) 4,05,000 (D) 6,50,000

30. The sum of third and ninth term of an A.P is 8. Find the sum of the first 11 terms of the progression.

(A) 44 (B) 22 (C) 19 (D) None of these

31. Given $A = 2^{65}$ and $B = (2^{64} + 2^{63} + 2^{62} + \cdots + 2^0)$

(A) B is 2^{64} larger than A (B) A and B are equal

(C) B is larger than A by 1 (D) A is larger than B by 1

32. What is the probability of getting at least one six in a single throw of three unbiased dice?

(A) 1 / 6 (B) 125 / 216 (C) 1 / 36 (D) 91 / 216

33. A man bets on number 16 on a roulette wheel 14 times and losses each time. On the 15th span he does a quick calculation and finds out that the number 12 had appeared twice in the 14 spans and is therefore, unable to decide whether to bet on 16 or 12 in the 15th span. Which will give him the best chance and what are the odds of winning on the bet that he takes? (Roulette has numbers 1 to 36)

(A) 16; 22:14 (B) 12; 72:1 (C) 12; 7:1 (D) Either; 35:1

34. An anti aircraft gun can fire four shots at a time. If the probabilities of the first, second, third and the last shot hitting the enemy aircraft are 0.7, 0.6, 0.5 and 0.4. what is the probability that four shots aimed at an enemy aircraft will bring the aircraft down?

(A) 0.084 (B) 0.916 (C) 0.036 (D) 0.964

35. A number is selected at random from first thirty natural numbers. What is the chance that it is a multiple of either 3 or 13?

(A) 17/30 (B) 2/5 (C) 11/30 (D) 4/15

36. In a class of 120 students numbered 1 to 120, all even numbered students opt for Physics, whose numbers are divisible by 5 opt for Chemistry and those whose numbers are divisible by 7 opt for Math. How many opt for none of the three subjects?

(A) 19 (B) 41 (C) 21 (D) 26

37. Anita had to do a multiplication. Instead of taking 35 as one of the multipliers, she took 53. As a result, the product went up by 540. What is the new product?

(A) 1050 (B) 540 (C) 1440 (D) 1590

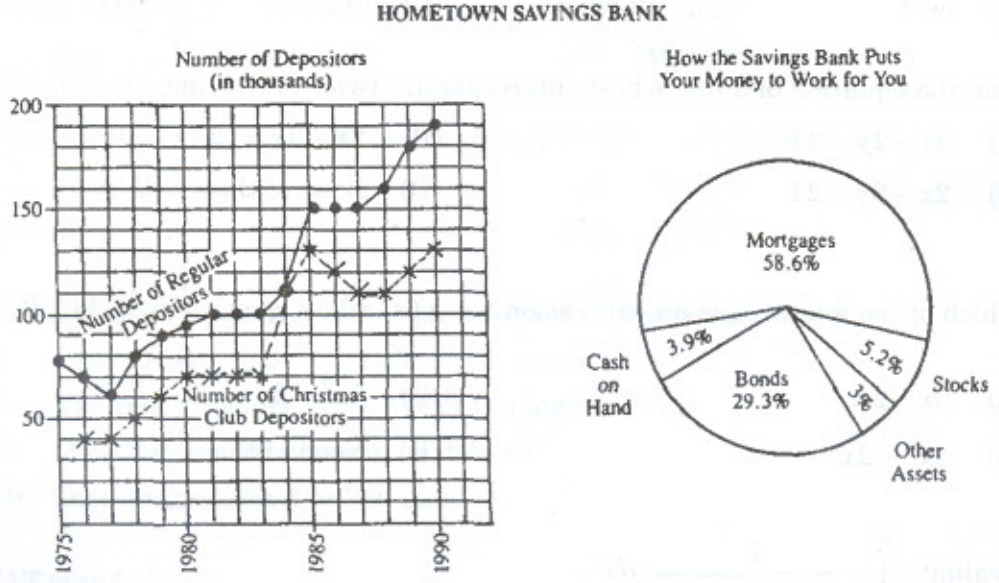
38. Find the G.C.D of $12x^2y^3z^2$, $18x^3y^2z^4$ and $24xy^4z^3$.

(A) $6xy^2z^2$ (B) $6x^3y^4z^3$ (C) $24xy^2z^2$ (D) $18x^2y^2z^3$

39. When a number is divided by 36, it leaves a remainder of 19. What will be the remainder when the number is divided by 12?

(A) 10 (B) 7 (C) 192 (D) None of these

Question 40-44 Refer to following diagram



40. How many thousands of regular depositors did the bank have in 1980?

(A) 70 (B) 85 (C) 95 (D) 100

41. In 1979 what was the ratio of the number of Christmas Club depositors to the number of regular depositors?

(A) 2/3 (B) 2/1 (C) 1/2 (D) 7/9

42. Which of the following can he inferred from the graphs?

I. Interest rates were static in the 1980-1983 period.

II. The greatest increase in the number of Christmas Club depositors over a previous year occurred in 1984.

III. Hometown Savings Bank invested most of its assets in stocks and bonds.

(A) I only (B) II only

(C) III only (D) I and III

43. About how many degrees (to the nearest degree) are in the angle of the sector representing mortgages?

(A) 59 (B) 106 (C) 211 (D) 246

44. The average annual interest on mortgage investments is m percent and the average annual interest on the bond investment is b percent. If the annual interest on the bond investment is x dollars, how many dollars are invested in mortgages?

(A) xm/b (B) xb/m (C) $100\,xb/m$ (D) $200\,x/b$

45. What is the area of the largest triangle that can be fitted into a rectangle of length 'l' units and width 'w' units?

(A) lw/3 (B) (2 lw)/3 (C) (3 lw)/4 (D) (lw)/2

46. Find the equation of a line whose intercepts are twice of the line $3x - 2y - 12 = 0$

(A) $3x - 2y = 24$ (B) $2x - 3y = 12$

(C) $2x - 3y = 24$ (D) None of these

47. Which of the following is an expression for $g'(x)$ when $g(x) = \int_2^x (5t^2 - 2t)\,dt$?

(A) $5x - 2x$ (B) $5x^2 - 3y$

(C) $5x^2 - 2x$ (D) None of these

48. Evaluate $\int_2^{10} \frac{1}{(2x+5)\sqrt{(2x+5)}}\,dx$

(A) 576.4 (B) 578

(C) 50 (D) None of these

49. Which of the following expressions represent the second-order derivative of the function?

$$y = \frac{x}{2x+1}$$

(A) $4/(5x-2)$ (B) $-4(2x+1)^3$

(C) $-4(2x-1)^3$ (D) None of these

50. A railway half ticket costs half the full fare and the reservation charge is the same on half ticket as on full ticket. One reserved first class ticket from Chennai to Trivandrum costs Rs. 216 and one full and one half reserved first class tickets cost Rs. 327. What is the basic first class full fare and what is the reservation charge?

(A) Rs. 105 and Rs. 6 (B) Rs. 216 and Rs. 12

(C) Rs. 210 and Rs. 12 (D) Rs. 210 and Rs. 6

51. Which key on the keyboard can be used to view Slide Show?

(A) F1 (B) F2 (C) F5 (D) F10

52. Which of the following is not a part of a standard office suite?

(A) Word Processor (B) Database

(C) Image Editor (D) File Manager

53. Outlook Express is a ————————.

(A) E-Mail Client (B) Scheduler

(C) Address Book (D) All of the above

54. Which of the following is the latest version of Microsoft Word?

(A) Word 97 (B) Word 98

(C) Word ME (D) Word XP

55. Which of the following statements in regard to Directories is false?

(A) Directories can exist inside directories

(B) The root directory is always at the highest level

(C) Directories with files can be deleted

(D) Directories cannot be renamed

56. FAT stands for

(A) File Accommodation Table (B) File Access Tape

(C) File Allocation table (D) File Activity table

57. VIRUS stands for

(A) Very Important Resource Under Search

(B) Virtual Information Resource Under Seize

(C) Verify Interchange Result Until Source

(D) Very Important Record User Searched

58. C language is available for which of the following operating system?

(A) DOS (B) Windows

(C) Unix (D) All of the above

59. Which of the following symbol is used to denote a pre-processor statement?

(A) ! (B) # (C) ~ (D) ;

60. Which of the following is a Scalar Data type?

(A) Float (B) Union (C) Array (D) Pointer

61. Memory is made up of

(A) Set of wires (B) Set of circuits

(C) Large number of cells (D) All of the above

62. Algorithm and Flow chart help us to

(A) Know the memory capacity

(B) Identify the base of a number system

(C) Direct the output to a printer

(D) Specify the problem completely and clearly

63. The equality operator is represented by

(A) := (B) .EQ. (C) = (D) ==

64. The output of printf("%u", –1) is

(A) –1 (B) minimum int value

(C) maximum int value (D) error message

65. Which operator in C is called a ternary operator?

(A) if...then (B) ++

(C) ? : (D) ( )

66. Identify the invalid pointer arithmetic

(A) Addition of float value to a pointer

(B) Comparison of pointers that do not point to the element of the same array

(C) Subtracting an integer from a pointer

(D) Assigning the value 0 to a pointer variable

67. _____ is the first program run on a computer when the computer boots up

(A) System software (B) Operating system

(C) Application software (D) All of the above

68. Multiprogramming systems

(A) are easier to develop than single programming systems

(B) execute each job faster

(C) execute more jobs in the same time period

(D) are used only one large mainframe computers

69. An organized collection of logically related data is known as

(A) Data (B) Meta data

(C) Database (D) Data versus information

70. In databases, Locking level is also called as

(A) Granularity (B) S lock

(C) X lock (D) Dead lock

71. Programs stored in ROM are called ————

(A) Hardware (B) Firmware

(C) Software (D) All of the above

72. Which technology is used in a CDROM Drive?

(A) Mechanical (B) Electromechanical

(C) Optical (D) Fiber Optical

73. MTBF means

(A) Mean Time Between Failure (B) Master Time Buffer Feature

(C) Most Treated Buffer Time (D) Master Test Board Feature

74. Time taken to move from one cylinder of a hdd to another is called

(A) Transfer rate (B) Average seek time

(C) Latency (D) Roundtrip time

75. Which of the following statements is/are true?

(A) Cache Memories are bigger than RAM

(B) Cache Memories are smaller then RAM

(C) ROM is faster than RAM

(D) Information in ROM can be written by users

76. A master-slave flip-flop has the characteristic that change in the

(A) input immediately reflected in the output

(B) output occurs when the state of the master is affected

(C) output occurs when the state of the slave is affected

(D) none of the above

77. In a PCM system, if the code word length is increased from 6 to 8 bits, the signal to quantization noise ratio improves by the factor

(A) 8/6 (B) 12

(C) 16 (D) None of the above

78. A Boolean function f of two variables x and y is defined as follows:

$f(0, 0) = f(0, 1) = f(1, 1) = 1$; $f(1, 0) = 0$

Assuming complements of x and y are not available, a minimum cost solution for realizing fusing only 2-input NOR gates and 2-input OR gates (each having unit cost) would have a total cost of

(A) 1 unit (B) 4 unit (C) 2 unit (D) 3 unit

79. The conduction loss versus device current characteristic of a power MOSFET is best approximated by a

(A) parabola (B) straight line

(C) rectangular hyperbola (D) none of the above

80. High Voltage DC (HVD(C) transmission is mainly used for

(A) bulk power transmission over very long distances

(B) inter-connecting two systems with the same nominal frequency

(C) eliminating reactive power requirement in the operation

(D) all of the above

81. A digital-to-analog converter with a full-scale output voltage of 3.5 V has a resolution close to 14 mV. Its bit size is

(A) 4 (B) 8 (C) 16 (D) 32

82. A 50 Hz, bar primary CT has a secondary with 500 turns. The secondary supplies 5 A current into a purely resistive burden of 1 W. The magnetizing ampere-turns is 200. The phase angle between the primary and secondary current is

(A) 4.6° (B) 85.4°

(C) 94.6° (D) None of the above

83. A bipolar junction transistor (BJT) is used as a power control switch by biasing it in the cut-off region (OFF state) or in the saturation region (ON state). In the ON state, for the BJT

(A) both the base-emitter and base-collector junctions are reverse biased

(B) the base-emitter junction is reverse biased, and the base-collector junction is forward biased

(C) both the base-emitter and base-collector junctions are forward biased

(D) the base-emitter junction is forward biased and the base-collector junction is reverse biased

84. A 800 kV transmission line is having per phase line inductance of 1.1 mH/km and per phase line capacitance of 11.68 nF/km. Ignoring the length of the line, its ideal power transfer capability in MW is

(A) 1204 MW (B) 1504 MW

(C) 2085 MW (D) None of the above

85. In relation to the synchronous machines, which one of the following statements is false?

(A) In salient pole machines, the direct-axis synchronous reactance is greater than the quadrature-axis synchronous reactance

(B) The damper bars help the synchronous motor self start

(C) Short circuit ratio is the ratio of the field current required to produce the rated voltage on open circuit to the rated armature current

(D) None of the above

86. For a first order instrument a 5% settling time is equal to

(A) four times the time constant (B) three times the time constant

(C) two times the time constant (D) the time constant

87. The output from a 633 nm He-Ne laser comes out from the mirror with a beam diameter of 1 mm and diverges to the far field. It is brought to a focus by a convex lens of focal length of 17 mm. The spot size diameter of the beam at the focal point is

(A) 20 μm (B) 26 μm (C) 52 μm (D) 13 μm

88. The measurements of a source voltage are 5.9 V, 5.7 V and 6.1 V. The sample standard deviation of the readings is

(A) 0.013 (B) 0.04

(C) 0.2 (D) None of the above

89. Bilinear transformation avoids the problem of aliasing encountered with the use of impulse invariance through

(A) mapping the entire imaginary axis of the s-plane on to the unit circle in the z-plane

(B) pre-filtering the input signal to impose bank-limitedness

(C) mapping zeros of the left half of the s-plane inside the unit circle in the z-plane

(D) all of the above

90. A twisted pair of wires is used for connecting the signal source with the instrumentation amplifier, as it helps reducing

(A) the effect of external interference

(B) the error due to bias currents in the amplifier

(C) the loading of the source by the amplifier

(D) all of the above

91. Which of the following organizations looks at standards for representation of data on the internet?

(A) ISOC (B) W3C (C) IETF (D) TCSEC

92. What is the other name for a LAN Card?

(A) NIC (B) Network Connector

(C) Internet Card (D) All of the above

93. Which of the following cables can transmit data at high speeds?

(A) Optic Fibre (B) UTP Cable

(C) Twisted Pair (D) Coaxial Cable

94. Which of the following is a term related with scanners?

(A) TWAIN (B) Catridge

(C) Media (D) All of the above

95. Who is the founder of BSD Unix?

(A) Dennis Ritche (B) Bill Joy

(C) Linux Torvalds (D) None of the above

96. Recently how much amount did RBI pumped into banking system to help exporters and to give a boost to the real estate?

(A) 3.10 lakh crores (B) 2.80 lakh crores

(C) 2.10 lakh crores (D) 2.60 laksh crores

97. Who is the present RBI governor?

(A) Y.V. Reddy (B) C.N. Rangarajan

(C) D. Subha Rao (D) Bimal Jalan

98. The conference of Economic / Finance ministers of ASEAN was held recently in

(A) Jakarta (B) New Delhi

(C) Bali (D) Tokyo

99. Which is the world's largest car manufacturing company?

(A) Ford (B) General Motors

(C) Volks Wagen (D) Toyota

100. Who was selected for NASSCOM leadership award 2008?

(A) Asim Preamji (B) Mukesh Ambhani

(C) Ratan Tata (D) Lakshmi Mittal