Applied Math M.C.Q's

No. of Questions: 20 (from 1 to 20)   Time allowed: 30 Minutes

Questions on Page Nos: 1 To 4   Negative markings: Yes

Q1. It is now March, what month will be after the 100 months from now?

  (A) March
  (B) April
  (C) July
  (D) August

Q2. What is the value of "x" if $3^{x+1} = 243$?

  (A) 3
  (B) 5
  (C) 7
  (D) 4

Q3. Ali and Omer share an apartment. If each month Ali pays x dollars and Omer pays y dollars, what percent of the total cost Ali pays?

  (A) $(x+y)*100$
  (B) $\dfrac{x}{y}\%$
  (C) $\dfrac{100x}{y}\%$
  (D) $\dfrac{100x}{x+y}\%$

Q4. If **x** is increased by 10% and **y** is decreased by 10%, the resulting numbers will be the same. What is the ratio **x** to **y**?

  (A) $\dfrac{3}{4}$
  (B) $\dfrac{9}{11}$
  (C) $\dfrac{4}{3}$
  (D) $\dfrac{5}{3}$

Q5. If $-27 = (-\dfrac{1}{3})^k$, what is the value of k?

  (A) -9
  (B) -3
  (C) $-\dfrac{1}{3}$
  (D) $\dfrac{1}{3}$

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Q6. If $4x = 144$, then $\frac{x}{4} =$?

    (A) 36
    (B) 09
    (C) 16
    (D) 12

Q7. The arithmetic mean of two numbers is m. If one of the numbers is 12, what is the other number?

    (A) m – 6
    (B) 2m – 6
    (C) m – 12
    (D) 2 * (m – 6)

Q8. The two numbers, whose sum is – 3 and product is – 40, are:

    (A) 15, – 2
    (B) 8, 5
    (C) – 8, 5
    (D) – 8, – 5

Q9. If scales are bought at 35 rupees per dozen and sold at 3 scales for 10 rupees, the total profit on 5.5 dozen is:

    (A) 35 rupees
    (B) 23.5 rupees
    (C) 26.5 rupees
    (D) 27.5 rupees

Q10. What is the average of 5^{30}, 5^{60}, $5^{17}, 5^{13}$ and 5^{90}?

    (A) 5^{210}
    (B) 5^{209}
    (C) $5^{29} + 5^{59} + 5^{16} + 5^{12} + 5^{89}$
    (D) 5^{205}

Q11. The ratio of boys to girls in a certain class room was 2:3. If boys represented five more than one-third of the class, how many people were in the class room?

    (A) 75
    (B) 23
    (C) 21
    (D) 27

Q12. The sum of two integers is 42 and their difference is 22. Then the greater of the two integers is:

(A) 25
(B) 32
(C) 08
(D) 10

Q13. Each of Khalid's buckets has a capacity of 11 gallons, while each of Zaheer's buckets can hold 8 gallons. How much more water in gallons can 7 of Khalid's buckets hold compared to 7 of Zaheer's buckets?

(A) 7 gallons
(B) 9 gallons
(C) 21 gallons
(D) 24 gallons

Q14. A sum of Rs. 7,000 is divided among A, B and C in such a way that shares of A and B are in the ratio 2:3 and those of B and C are in the ratio 4:5. The amount received by C is:

(A) Rs. 3,900
(B) Rs. 3,000
(C) Rs. 2,800
(D) Rs. 2,600

Q15. Two candidates contested an election. One got 65% of the votes and won by 300 votes. The total numbers of votes polled were:

(A) 1200
(B) 1000
(C) 800
(D) 600

Q16. Javeria is having a party at 7:00 P.M. Guests begin arriving at a uniform rate of 8 people every 15 minutes. If this pattern continues, how many guests will have arrived at 9:00 P.M?

(A) 80
(B) 64
(C) 40
(D) 20

Q17. November is the busiest month at Panorama center, Lahore, where sale in November is 40 percent higher than the average. If sale in March is typically 20 percent lower than the average, what is the ratio of the March sale to November sale?

(A) 2:3
(B) 2:1
(C) 3:2
(D) 4:7

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Q18. A can do a piece of work in 35 days while B can complete it in 45 days. They start to work together, but A drops out after 7 days. In how many days will B take to finish the remaining work?

    (A) 29
    (B) 36
    (C) 45
    (D) None of the above

Q19. If $\dfrac{3a-1}{25} = \dfrac{a+5}{11}$, what is the value of a?

    (A) 13
    (B) 136
    (C) $\dfrac{5}{6}$
    (D) 17

Q20. A man spends 75% of his income. His income is increased by 20% and he increased his expenditures by 10%. His savings are increased by:

    (A) 10%
    (B) 25%
    (C) 37.5%
    (D) 50%

If you finish before time is called, you may check your work on this section only.

(Stop. Do not turn over the next page until you are told to do so.)

English M.C.Q's

No. of Questions: 20 (from 21 to 40)   Time allowed: 30 Minutes

Questions on Page Nos: 5 To 10   Negative markings: Yes

Questions 21-23 are based on short paragraphs. Select the statement that is *best* supported by the passage.

21.

There are two kinds of jewelry that I do. There is commercial jewelry - class rings, necklaces, the kinds of things most people wear. I sell these items to meet my expenses for raw materials, supplies, and to make my living. The other, more creative work I do makes me feel that I am developing as a craftsperson.

The author of this passage implies that:
A. artists are poor.
B. there is no market for creative work.
C. rings and necklaces can not be creative.
D. commercial and creative work fulfills different needs for the artist.

22.

Huge beasts such as the dinosaur have never really become extinct. Mothra, a giant caterpillar who later becomes a moth, destroys Tokyo, and stars in the 1962 Japanese film named for him. Mothra is born, dies, and is reborn regularly on classic movie channels. In Japan, Mothra is one of the most popular films ever made. Mothra has survived the creation of more current scary creatures such as giant apes, extraterrestrial beings and swamp creatures. More than 30 years after his creation, Mothra still lives.

The main subject of the passage is:
A. the reasons that fads do not endure.
B. the lasting appeal of Mothra.
C. the difficulty of marketing good horror movies.
D. old models for creatures are still used because making new monsters is expensive.

23.

Many people who have come close to death from drowning, cardiac arrest, or other causes have described near-death experiences—profound, subjective events that sometimes result in dramatic changes in values, beliefs, behavior, and attitudes toward life and death. These experiences often include a new clarity of thinking, a feeling of wellbeing, a sense of being out of the body, and visions of bright light or mystical encounters. Such experiences have been reported by an estimated 30 to 40 percent of hospital patients who were revived after coming close to death and about 5 percent of adult Americans in a nationwide poll. Near- death experiences have been explained as a response to a perceived threat of death (a psychological theory); as a result of biological states that accompany the process of dying (a physiological theory); and as a foretaste of an actual state of bliss after death (a transcendental theory).

The primary purpose of this passage is to:
A. entertain
B. persuade
C. inform
D. express disbelief in the afterlife

Questions 24 - 25 comprise two sentences, followed by a question or statement. Read the sentences and then choose the best answer to the question or the best completion of the statement.

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24.

When we write a check that we know is going to "bounce," we are in fact performing a criminal act.
It is a crime to knowingly write a "bad" check, one we know we don't have sufficient funds to cover.
   What does the second statement do?
   A. It provides supporting evidence for the first statement.
   B. It draws a conclusion from the first sentence.
   C. It restates the central idea of the first sentence.
   D. It provides a contradictory point of view.

25.

Anxious to ensure that America would depart from European traditions regarding religion and royalty, the early U.S. could be described as a place that focused more on work than on the entertainment offered by spectacle and ceremony in the Old World.
However, national celebrations such as the lighting of the White House Christmas Tree and the ceremonies used to swear in new federal officials give the American people some experiences that are based upon national tradition.
What does the second sentence do?
   A. It cancels the meaning of the first sentence.
   B. It provides an example of the first sentence.
   C. It adds more detail to the first sentence.
   D. It offers an exception to the information given in the first sentence.

Questions 26-28, comprise paragraphs with jumbled order. Select the option that *best* represents the logical order of the paragraph.

26.

   i.   Hungry predators often invade the colony and unsettle the balance.
   ii.   The colony flourishes only if the proportion of soldiers to workers remains roughly the same, so that the queen and workers can be protected by the soldiers, and the queen and soldiers can be serviced by the workers.
   iii.   But its fortunes are presently restored, because the immobile queen, walled in well below ground level, lays eggs not only in large enough numbers, but also in the varying proportions required.
   iv.   The hump is alive with worker termites and soldier termites going about their distinct kinds of business.
   v.   How can we account for her mysterious ability to respond like this to events on the distant surface?
   vi.   Picture a termite colony, occupying a tall mud hump on an African plain.

      A. vi, v, iii, i, ii, iv
      B. vi, iv, ii, i, iii, v
      C. i, v, iii, ii, vi, iv
      D. i, iv, iii, vi, v, ii,

27.

   i.   But no such mechanism exists in the humanities—much of what humanities researchers call research does not lead to results that are replicable by other scholars.
   ii.   Given the importance of interpretation in historical and literary scholarship, humanities researchers are in a position where they can explain away deliberate and even systematic distortion.
   iii.   Mere suspicion is enough for funding to be cut off; publicity guarantees that careers can be effectively ended.

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iv.   In the sciences, even questionable examples of research fraud are harshly punished.
v.   Forgeries which take the form of pastiches in which the forger intersperses fake and real parts can be defended as mere mistakes or aberrant misreading.
vi.   Scientists fudging data have no such defenses.

    A.   iii, iv, i, vi, ii, v
    B.   iv, iii, i, ii, v, vi
    C.   iii, ii, i, iv, vi, v
    D.   iv, i, iii, ii, v, vi

28.

i.   The concept of a 'nation-state' assumes a complete correspondence between the boundaries of the nation and the boundaries of those who live in a specific state.
ii.   However, the fiction has been, and continues to be, at the basis of nationalist ideologies.
iii. Then there are members of national collectivities who live in other countries, making a mockery of the concept.
iv.   There are always people living in particular states who are not considered to be (and often do not consider themselves to be) members of the hegemonic nation.
v.   Even worse, there are nations which never had a state or which are divided across several states.
vi.   This, of course, has been subject to severe criticism and is virtually everywhere a fiction.

    A.   i, vi, iv, iii, v, ii
    B.   i, iii, vi, ii, iv, v
    C.   iv, iii, vi, i, v, ii
    D.   iv, i, iii, vi, ii, v

For Questions 29-34, select the statement that is *best* supported by the information given in the passage.

29.

The school principal has received complaints from parents about bullying in the school yard during recess. He wants to investigate and end this situation as soon as possible, so he has asked the recess aides to watch closely.

Which situation should the recess aides report to the principal?

    A.   A girl is sitting glumly on a bench reading a book and not interacting with her peers.
    B.   Four girls are surrounding another girl seem to have possession of her back pack.
    C.   Two boys are playing a one-on-one game of basketball and are arguing over the last basket scored.
    D.   Three boys are huddled over a handheld video game, which isn't supposed to be on school ground.

30.

Dr. Miller has a busy pediatric dentistry practice and she needs a skilled, reliable hygienist to keep things running smoothly. The last two people she hired were recommended by top dentists in the area, but they each lasted less than one month. She is now in desperate need of a hygienist who can competently handle the specific challenges of her practice.

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Which one of the following candidates should Dr. Miller consider most seriously?

A. Marilyn has been a hygienist for fifteen years, and her current employer, who is about to retire, says she is the best in the business. The clientele she has worked with consists of some of the wealthiest and most powerful citizens in the county.

B. Lindy years recently graduated at the top of her class from one of the best dental hygiene programs in the state. Prior to becoming a dental hygienist, Lindy spent two years working in a day care center.

C. James has worked as a dental hygienist for three years in a public health clinic. He is very interested in securing a position in a private dental office.

D. Kathy is an experienced and highly recommended dental hygienist who is also finishing up a degree in early childhood education, which she hopes will get her a job as a preschool teacher. She is eager to find a job in a pediatric practice, since she has always wanted to work with children.

31.

Mrs. Jansen recently moved to Arizona. She wants to fill her new backyard with Flowering plants. Although she is an experienced gardener, she isn't very well-versed in what plants will do well in the Arizona climate. Also, there is a big tree in her backyard making for shady conditions and she isn't sure what plants will thrive without much direct sunlight. Her favorite gardening catalog offers several backyard seed packages.

Which one should Mrs. Jansen choose?

A. The Rainbow Collection is ideal for North- east gardens. It includes a variety of colourful perennials that thrive in cool, moist conditions.

B. The Greenhouse Collection will blossom year after year if planted in brightly lit locations and watered regularly.

C. The Treehouse Collection will provide lush green plants with delicate colorful flowers that thrive in shady and partially shady locations.

D. The Oasis Collection includes a variety of perennials that thrive in dry climates and bright sunlight.

32.

When they heard news of the hurricane, Maya and Julian decided to change their vacation plans. Instead of traveling to the island beach resort, they booked a room at a fancy new spa in the mountains. Their plans were a bit more expensive, but they'd heard wonderful things about the spa and they were relieved to find availability on such short notice.

A. Maya and Julian take beach vacations every year.

B. The spa is overpriced.

C. It is usually necessary to book at least six months in advance at the spa.

D. Maya and Julian decided to change their vacation plans because of the hurricane.

33.

Seashore populations have declined everywhere that seahorses are fished. During the past five years, seahorse populations have decreased by 50%. Last year, biologists met to discuss what might be done to reverse this trend.

A. Seahorses are likely to become extinct within five years.

B. One way to increase seahorse populations is to ban the fishing of seahorses.

C. Biologists from all over the world are working to save the seahorses.

D. Seahorse fishermen have spoken out against the biologists.

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34.

Ten new television shows appeared during the month of September. Five of the shows were sitcoms, three were hour-long dramas, and two were news-magazine shows. By January, only seven of these new shows were still on the air. Five of the shows that remained were sitcoms.

    A. Only one of the news-magazine shows remained on the air.
    B. Only one of the hour-long dramas remained on the air.
    C. At least one of the shows that was cancelled was an hour-long drama.
    D. Television viewers prefer sitcoms over hour-long dramas.

For **Questions 35-40,** match definitions to particular situations. Select the answer that provides the best example of the given definition. Answer each question *solely* on the basis of the definition given.

35.

Exodus usually means withdrawal.
Which statement is below can be a example of Exodus?

    A. Arrived yesterday on about 20 busses as well as a train that had originated just south of Pristina.
    B. The going out or journey of the Israelites from Egypt under the conduct of Moses.
    C. All apart from my friend who just stood observing the apparent comings and goings of Joe Public.
    D. We live in the last days, between the first and second comings of Christ.

36.

Be a dime a dozen means Overly abundant.
Which situation below is the best example of Be a dime a dozen?

    A. Romantic novels like these not have much value.
    B. Unfortunately, car exhaust fumes have given the formerly abundant ferns a hard life.
    C. Unlike other types of schizophrenia the patients are usually presentable and if delusions are not acted on may function in an apparently normal manner.
    D. Although it all looks normal enough at first glance, only two of the numbers are where you would expect them to be.

37.

The definition of a reprieve is an escape, from expected punishment or consequence. Which situation below is the best example of Reprieve?

    A. Measurements of the degree of seriousness of a crime have been developed.
    B. In total, six men faced charges of conspiracy to blackmail, false imprisonment and gun possession.
    C. Government thinking for withdrawal of any sentence on his aides for a period of time.
    D. The judge is also bound to grant a reprieve when the prisoner becomes guilty of murder.

38.

Quid pro quo mean "a favor for a favor".
Which situation below can be the best example of a Quid pro quo?

A. Relationships that understand the need for a healthy give and take balance are less likely to fail because both partners know and understand the value of the other.

B. That part of capital flows that represents a direct financial flow from a parent company to an overseas firm that it controls.

C. Iran used to be India's second-largest supplier, but is now fifth or sixth.

D. India is not buying and U.S. is not selling any Fighter Planes.

39.

Mutiny is a conspiracy among a group of individuals to openly oppose, change or overthrow an authority to which they are subject.
Which situation below is the best example of a Mutiny?

A. The Indian rebellion of 1857 was a period of armed uprising in India against British colonial power.

B. In August 1996, The Leader was forced to leave Sudan and arrived in Jalalabad, Afghanistan.

C. Bombers operating at high altitudes well out of range of antiaircraft guns bombed at neighbor country's training camps.

D. The Forces and the Northern Alliance also began to diverge in their objectives.

40.

Indemnity insurance compensates the beneficiaries of the policies for their actual economic losses, up to the limiting amount of the insurance policy.
Which situation below is the best example of Indemnification?

A. Slave owners suffered a loss whenever their slaves or indentured servants were granted their freedom. Slave owners might have been paid to cover their losses.

B. If, however, there is excess cash balances and increasing cash generation, the excess cash needs to be invested or distributed.

C. If anyone use a business with total assets of $1,000,000 and cash making up 15%, or $150,000, of that total.

D. As the applicants could not afford to make the premium payments. In order to accomplish his scheme, Ramesh further agreed to provide the premium payments on behalf of the applicants.

This is the END of the MCQs part of the Test.

Please wait for the third part of the test, which is about a CASE STUDY.