

Central Armed Police Forces(CAPF) BSF/CRPF/CISF/SSB/ITBP

A Comprehensive Guide

Assistant Commandant

Examination

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- General Studies .
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Yagya Nand Jha

General Studies

ANCIENT INDIA

The discovery of Mohenjodaro and Harappa by British archeologist: *Marshall* proved that Indian civilization is the oldest civilization in the world. Even India came before Greece, considered the oldest civilization before the discovery of Mohenjodaro and Harappa. The main features of Ancient Indian History are as follows:

Indus Valley Civilization

Discovery: In 1921, R.B. Dayaram Sahani, first discovered Harappa, in the Montgomery district of the Punjab. According to radio-carbon dating, it spread from the year 2350-1750.

Indus Valley Civilization

Dr. R. D. Banerjee found the ancient city Mohenjodaro (literally, 'city of the dead') in Larkana district of Sindh, now in Pakistan in 1922.

The Marvelous Town Planning of Mohenjodaro: A chief feature of Mohenjodaro is its superb town planning. The streets, which divided the city into neat rectangular or square blocks, varied in width but always intersected each other at right angles.

The city had an elaborate drainage system, consisting of horizontal and vertical drains, street drains and so on. The architecture of the buildings was clearly intended to be functional and minimalist, and certainly not to please the aesthete. Mohenjodaro was obviously a cosmopolitan city, with people of different races mingling with the local populace-Proto-Austroloid, Mediterranean, Alpine and Mongoloid.

The Indus Valley Civilization

Before the coming of Aryans, there was a civilization that was not only well-developed, but actually far more sophisticated than that of the Arvans. The Indus Valley civilization said its last hurray roughly in 2200 BC. The beginning and end of the Indus Valley Civilization are both a matter of debate because people could not have emerged complete with their perfect town planning, neat houses, lovely jewellery and loads of makeup. So where did they come from? and then having come, just where did they disappear? Popular theory, which is most accepted is that the people of the Harappan civilization were chased out by the Aryans and went down south. The present South Indians are their

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descendants.

The Vedic Period (1500 Bc-600 Bc)

Initially, they settled in the area of Sapt-Sindhu, which included Punjab, Kashmir, Sindh, Kabul and Gandhara (Kandhar). The chief sources of this period are The Vedas and the Epics, the Mahabharata and the Ramayana, which through their stories PO and hymns tell us about the expansion of the Aryans. The epic Ramayana is a symbolic tale which tells of the Aryan expansion to the south-the good, almost godly, aryaputra (an Aryan's son) king Rama surging forth to finish off the evil Dasyu (that was what the Aryans called the natives) Ravana.

Aryans Political System

There was complex political system. They hung around together in small village settlements (which later grew to kingdoms) and the basis of their political and social organization was the clan or kula. It was very much a patriarchal society, with the man the house expected to keep his clan in control.

The King was the Supreme Power

The king was the supreme power though he had to work in tandem with the people's wishes. He had an elaborate court of many officials, including the chief queen (Mahishi) who was elected to help in the decision making process. Two Assemblies, Sabha and Samiti further assisted the king.

No Rigidity in Caste System

The caste system was a loose social sys-

tem where people could move up and down the social scale. Aryan's worshipped nature gods-they prayed to the Usha (Dawn), Prajapati (The Creator), Rudra (Thunder), Indra (Rain), Surya (Sun) and so on. These gods and goddesses were appeased by prayers and sacrifices.

Growth of Buddhism and Jainism

Buddhism and Jainism were instant hits with the populace and became powerful clannish minorities while the bulk of the people remained with Aryanism. Not for long, however. As the two new religions which had extremely charismatic leaders and very zealous followers caught the people's imagination, the influence of both faiths spread enough for kings to profess and actively promote them.

BUDDHISM

- Buddhism founded by Gautam Budha or Siddharha.
- The Buddha also known is Sakyamuni or Tathagata.
- Born in 563 BC on the Vaishakha Poornima day at Lumbini (near Kapilavastu), in Nepal
- His father Suddhodana was the Sakes ruler.
- His mother (Mahamaya, of Kosala dynasty) died after 7 days of his birth, brought up by stepmother Gautami.
- Married at the age of 10 to Yoshodhara. Enjoyed the married life for t 3 years and had a son named Ralula.
- After seeing an old man, a sick man, a corpse and an ascetic. he decided to become a wanderer.
- Left his palace at the age of 29 in search of

truth (also called Mahabhinishkramana' or the Cheat *Renunication*) and wandered for 6 years.

- Attained 'Enlightenment' at Gaya in Magadha (Bihar) under the Pipal tree.
- Delivered the first sermon at Samath where his five disciples had settled. His first Sermon is called 'Dharmachakrapracartan' or 'Turning of the Wheel of Law'.
- Attained Mahaparinirvana at Kushinagar (identical with village Kasia in Deoria district of UP), in 483 BC at the age of 80 In the Malla republic.

BUDDHIST COUNCILS

First Council: At Rajgriha, in 483 BC under the Chairmanship of Mehakassaapa (king was Ajatshatru). Divided the teachings of Buddha in to two Pitakas- Vinaya Pitaka and Sutta Pitaka.

Second Council: At Vaisahali, in 383 BC under Sabakami (King was Ashoka), followers divided into Sthavirmadins and Mahasanghikas.

Third Council: At Pataliputra, in 250 BC under Magaliputta Tissa (King was Ashoka) In this, the third part of the Tripitaka was coded in the Pali language.

Fourth Council: At Kashmir (Kundalvan) in 72 AD under Vasumitra (King was Kanishka, Vice-Chairman was ashwaghosha), divided Buddhism into Mahayana and Hinayana sects.

Buddist Literature: In Pali language. **Vinaya Pitaka:** Rules of discipline in the Buddhist monasteries.

Sutta Pitaka: Largest, contains collec-

tion of Buddha's sermons.

Abhidhamma Pitaka: Explanation of the philosophical principles of the Buddhist religion.

JAINISM

- · Led by Rishabha.
- There were 24 Tirthankaras (Prophets or Gurus), all Kashtriyas. First was Rishabhnath (Emblem: Bull).
- The 23rd Tirthankar Parashwanath (Emblem: Snake) was the son of King Ashvasena of Banaras.
- The 24th and last Tirthankar was Vardhman Mahavira (Emblem: Lion). He was born in kundagram (Distt Muzaffarpur, Bihar) in 599 BC.
- His father Siddhartha was the head of Jnatrika Clan.
- His mother was Trishla, sister of Lichchavi prince. Chetak of Vaishali.
- Mahavira was related to Bimbisara.
- Married to Yashoda, had a daughter named Priyadarsena, whose husband Jamali became his first disciple.
- At the age of 30, after the death of his parents, he became an ascetic.
- In the 13th year of his asceticism (on the 10th of Vaishakha), outside the town of Jrimbhikgrama, he attained supreme knowledge (kaivalya).
- From now on he was called Jaina or Jitendriya and Mahavira, and his followers were named Jains. He also got the title of Arihant, i.e., worthy.
- At the age of 72, he attained death of Pava, near Patna, in 527 Bc.
- Mahavira preached almost the same message as Parshvanath and aded one more, Brahmcharya (celibacy) to it.

Magadh Empire

Harijanka

The first important Magadhan king, who emerges into the limelight was Bimbisara (544-491 BC) of the Harijanka. He was an extremely polished diplomat and crafty statesman. While the earlier rulers had brought Magadha out of clear and present danger, it was Bimbisara, who consolidated and increased that power and really gave it the identity of a kingdom. According to sources, eighty thousand villages were there in the kingdom. Bimbisara was a contemporary of the Buddha and met him twice. When he met him the second time, in Rajgriha (which is an important Buddhist pilgrimage today), Bimbisara converted to Buddhism. Bimbisara was assassinated by his impatient son Ajatsatru, who was a good friend of the Buddha's cousin Devadutta. Ajatsatru continued his imperialist policies. The most famous rivalry went on between him and the Lichchavi dynasty that ruled Vaishali (in Bihar), which he eventually managed to conquer. Ajatsatru was a colourful character and a man of sentiment. There are tales of his passionate affair with the chief courtesan of Vaishali, called Amrapali. During his reign, that Buddha attained parinirvana (nirvana from all births and bonds). Ajatsatru insisted upon a part of his relics be buried in a stupa (shrine) that he got erected in Rajgriha.

Shishunanja Dynasty

The Shishunanja dynasty faded fast af-

ter Ajatsatru. The last recorded ruler of the family was Kakavarna who was put to death by Mahapadmananda, of the Nanda dynasty, which followed the Sisungas.

The Nandas known for their airs of magnificence and immense wealth (which they amassed by huge taxation). They were of lowborn sudra stock and hence had the odds stacked against them right from the start. The Nandas, though very powerful with a huge standing army and a grand court, were apparently a very vain lot. The most famous of this dynasty was Dhanananda. He started his own downfall by insulting a certain unsightly looking Brahmin, who unfortunately for Dhanananda, turned out to have surprising vision, intellect and Machiavellian cunning.

Alexander Invation (Great Invation)

Alexander, the son of Phillip of Macedonia (Greece), invaded India in 326 BC. His major battle was with Poras, the king of Panjab on the banks of river Jhelum. Alexander emerged victorians. It was the result of Alexander's invasion that the link between India and the West was initiated.

Mauryan Dynasty (321 Bc-185 BC)

The dynasty that Chandragupta and Chanakya established in Magadha together, was the first real dynasty of Indian history. There is no certain theory about the lineage of Mauryas. One of the most prominent theory was that he was actually the son of Dhanananda mistress called Mura, and hence the name Maurya.

Whatever might be the lineage of Chandragupta Maurya, Chanakya, with him made a formidable team and stayed together till the end of Chandragupta's reign, when Chanakya lived to see the early half of his successor Bindusara's (298-273BC) reign too. There is sufficient evidence to prove that elaborate planning and much intrigue went to shake the Nandas out of the Magadha throne. A few early attempts, in fact, failed. There is a story about how Chandragupta finally got the idea that managed to defeat the Nanda might. Apparently he was walking round Taxila when he saw a woman feeding her son a dish of rice and lentils. As the son started to go straight for the middle of the dish, his. mother reprimanded him and told him to start eating from the sides, for the centre was bound to be hotter. This gave Chandragupta the idea to abandon trying to directly take on the Magadhan armies, and consolidate his position around it first and then Nandas. Chandragupta was succeeded by Bindusara who was commonly known as Amitraghat (slayer of foes). He was a dynamic and brilliant diplomat. He started sending and receiving missions to Egypt. Greece, Persia, Mesopotamia and various other countries. Trade increased, the economy prospered and there was general prosperity in the kingdom. He was succeeded by Ashoka the Great.

Ashoka the Great

Ashoka Piyacassi Maurya (269-232 BC) was perhaps Buddhism's most famous convert. He has caught the imagination of many

as the cruel king who suddenly, after one battle, saw the light and became an avowed non-violent though he did put all his brothers to death to come to the throne, but then that was no different from what any other aspiring king would have done, and no doubt any of his brothers in similar circumstances would have done the same. It was during Ashoka's reign, for the first time, almost the entire regions of present-day India were united under one central authority. Ashoka made Buddhism the state religion. Ashoka propounded the philosophy of Dhamma, which was something like correct moral code of conduct meets metaphysics. It has been suggested that Ashoka abandoned all violence so thoroughly that he even disbanded the army. Ashoka also sent Buddhist missionaries abroad to spread the light; the most famous of these was sent to then Ceylon (Sri Lanka), under his own son Mahindra and daughter Sanghamitia.

After Ashoka, a few Mauryan kings came but they could not sustain the kingdom. Consequently, the Mauryans were succeeded by Pushyamitta Sunga (184-149 BC)

The Post-maurya Period

In the post-Maurya period, three dynasties jostled, came and went with astonishing speed on the Magadhan throne. The first among these were the Sungas, under whom the country made certain progress. The Sunga rulers were also quite successful in checking foreign invasions. Art and culture also flourished considerably under the Sungas who were particularly known to be great patrons

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of both.

The Sungas were followed by the Kanvas, who were almost like a blip in the scene of Indian history, lasting only 45 years in all, The other important dynasty of this Post-Mauryan confusion was the Andhras or the Satavahanas. According to traditional sources, they were apparently Dasyus (as opposed to Aryans) from south India. Even in Ashoka's time, this dynasty had risen to quite a bit of prominence along the southwest regions. Though the dynasty was founded by Simukha (235-213 BC), it had 30 kings in all. One of the most famous rulers of this dynasty was Sri Satkarni (194-184 BC), who had a kingdom covering almost all of south India, down to the andhra region and around with his capital as the present Aurangabad.

The next important dynasty to step into the scene were the Kushanas, about whom not much is known. Though there is controversy even over the date of accession of their most important king Kanishka, he most probably ruled sometime in the first century AD. Kanishka has been greatly associated with Buddhism and his reign made the religion popular again. Much artistic, cultural, spiritual and literary activity was encouraged by him to promote the religion. It was in his reign that Buddhism split into two sects, Hinayana (the older simpler religion when Buddha was not considered God) and Mahayana (the more ritualistic Buddhism, which worships the Buddha). The latter was the state religion of the Kushanas, who were Indo-Greek by origin.

Gupta Dynasty

After the Kushanas, India saw political unity only under the second great dynasty of ancient Indian history after the Mauryas, the Guptas. The imperial Guptas were great conquerors, efficient administrators and renowned patrons of the arts, science and culture. What's more, they lasted for long; they had at least six strong rulers. Their reign is called the Golden Age of ancient Indian history. It is during this reign that the Hinduism was revived. To revive the glory of the 'old' culture, which had been obscured by the socalled foreign rulers, must have been a matter of pride for them. In this, however, carne certain downs. For example the caste system came back with a vengeance but no longer as the flexible loose social structure of the early Aryan days, but a strict code that later became such a curse for India.

Great Rulers of Gupta Dynasty

The first Gupta king was Chandra Gupta (320-335 AD), though not much is known about him. Next in line was Samudragupta (335-375 AD) who, by all accounts, seemed to have been nothing short of a genius. He appears to have cone to the throne brimming with an amazing appetite for conquest, Considering that he defeated kings all over northern and southern India (in all about twenty-four of them) one wonders when did he get the time to govern the kingdom. He introduced the concept of annexation. It meant that

he retained the old kings as vassals to keep the administration going. He was a skillful diplomat who had excellent relations with not only foreign rulers but also his vassal-kings, surely a much more difficult task to achieve, Due to his ingenious ideas of government, Samudragupta could establish a really powerful empire. He was also a great scholar and was especially fond of poetry and spiritual studies.

Samudragupta was followed by his elder son Ramagupta (375-380 AD), who was a blot on that proud family's good name. Apparently he was having immense trouble with the central Asian Saka invaders who refused to budge from borders of the empire and threatened to come in. Ramagupta sued for peace, and the Saka king agreed on one condition that his queen Dhruvadevi he surrendered to him. Which was okay with Ramagupta, but not his younger dra upta who, disguised as the queen, entered the Saka camp and killed his brother and married Dhruvadevi and succeeded the throne. He came to be called Chandrgupta Vikramaditya (380-413AD) and was an excellent ruler. Vikramaditya's main achievement was that he managed to quash the stronghold of the Saka might (called the Saka Satraps) in India. Fa-Hien, the famous Chinese Buddhist travellerstudent came to India during his rule. The next kings of the dynasty were Kumaragupta (413-AD) anupta (455—468 AD). They were considerably troubled by foreign invasions, especially the latter who had to contend with the Huns. The Huns, were defeated by Skandagupta. The period between 458—540 AD saw five Gupta rulers and the slipping away of the reigns of a once-powerful kingdom away from their hands. The Guptas were the last great dynasty to rule India till the Delhi Sultanate came along much later and certainly they were the end of great Aryan rulers.

Vardhana Dynasty

The final important ruler of Ancient Indian history was Harsha Vardhana (606-646 AD), who ruled not from Magadha but Thanesar (in modern Haryana area) of the Vardhana dynasty. He was a Buddhist and convened many Buddhist assemblies. The second Chinese traveller to come to India, Huien Tsang, arrived during his reign. The south presented a medley of dynasties around the time of Harsha Vardhana. There were the Pandyas (in regions of Mudurai, Travancore and Tinnevelly), the Chalukyas (in present Maharashtra region) and Pallavas (in modem Tamil Nadu region), who had this terrific battle of supremacy going constantly. Pulakesan H (610-642AD) was the ablest of the Chalukyan kings and for a time managed to keep the Chalukyan flag flying above the others.

Other Dynasties

The Most Powerful Cholas

The most important dynasty to rise out of the southern India was Cholas. Unlike other dynasties (the Chalukyas, the Pallavas, the Pandyas or the Rashtrakutas), their origins are not traced from outside, but very much

from the south itself. The Deccan region was at this time in much turmoil. The Cholas had managed almost immediately to reduce the Pallavas to the status of minor feudatories. The Rashtrakutas were in decline now, but their place was taken by the Chalukya family (imaginatively called the later Chalukyas by historians), who were gaining strength in the region of western Deccan. The power equation in the Deccan now involved the later Chalukyas, the Yadavas of Devagiri (northern Deccan; region around Aurangabad), the Kakatiyas of Warangal (Andhra Pradesh) and the Hoysalas of Dorasamudra (Mysore). The Cholas managed with sheer tenacity over a period of 300 years from 900-1100 AD. This period saw the final settling down and consolidation of Tamil culture. In whatever sphere-whether of social institutions, religion, fine arts, music, dance, jewellery, the standards that were set during this period came to be regarded as classical, and dominate, in a modified form, much of the living patterns of south Indians even today. This period also saw the spread of this culture overseas to Southeast Asia, regions with whom the Cholas had strong political and economic relations. The Cholas came to power in the middle of the 9th century AD. The first ruler was Rajaraja Chola I (985-1014 AD) and his son and successor Rajendra Chola (1014-1035AD). Both father and son put their heads down and campaigned in almost every direction. The Cholas had an effective navy and Rajaraja, with a view to control this trade route completely, led an attack to the Maldive

Islands too. Rajendra I, ruled together with father for two years before going solo in 1014 AD. He aggressively continued his father's imperialist policies with the annexation of the region around modem Hyderabad, which was controlled by the Chalukyas at that time. He also turned his attention northwards where he reached right upto the Ganges valley, Orissa and west Bengal areas. Rajendra Chola I was killed in 1052 AD, in battle against his old foes, the Chalukyas.

Ascent of Rajput Power

The timed the fading away of Harsha Vardhana (606-646 AD) and with it the Vardhana might and the rise of Islamic power in India was occupied with the ascent of Rajput power. This, however, wap a very short-lived period, mainly due to the in-fighting among the fiercely divided Rajputs. As can be imagined, India under the Rajputs was not exactly what one could call a single and completely unified unit. Delhi and Ajmer, under the Chauhans, were the most powerful states of this period. However, the first Rajputs to hit Delhi were the Tomaras. In fact, the second city of Delhi, Lid Kot (the Red Fort) was built in 1060 A.D. by Raja Anang Pal, one of the earliest Tomara rulers to settle in Delhi. Their rule was pretty, short-lived, though, and soon the Chauhan Raiputs under the generalship of Prithviraj Chauhan seized control of Lal Kot in the 12th century. There were other states where Rajputs were gaining prominence. Like Kanauj (in present Uttar Pradesh) where in this period ruled Jaichand,

a Rathore (another Rajput family) ruler, who was a bitter rival of Prithviraj Chauhan. In Bundelkhand (in Madhya Pradesh), the Chandravansi (of the moon family) Chandelas were ruling. Malwa and Gujrat were under the Paramaras (the most important ruler was king Bhoj) and Chaulukyas (who are supposed to descendants of the Chalukyas) respectively. This was a very troubled time in Indian history. There was no clear central authority in sight and each petty ruler was daring to dream the mad dream of ruling all over the country-which at that point in time meant basically the Gangetic plains and the Deccan. This is the main reason why no ruler was able to hold Delhi long enough to establish a kingdom here, and also the principle reason why the Arabs and Turks did not exactly have to sweat to the bone to stamp their ority all over them.

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Math

AVERAGE

- 1.In a class of 52 students the number of boys is two less than the number of girls. Average weight of the boys is 42 kg, while the average weight of all the 52 students is 40 kg. What is the approx. average weight of the girls.
 - (a) 38 kg
- (b) 39 kg
- (c) 40 kg
- (d) 42 kg
- 2.19 persons went to a hotel for a combined dinner party. 13 of them spent Rs. 79 each on their dinner and the rest spent Rs. 4 more than the average expenditure of all the 19. What was the total money spent by them?
 - (a) 1628.4
- (b) 1536
- (c) 1492
- (d) 1632

RATIO AND PROPORTION

- 1. If a, b, c and d are proportional then the mean proportion between $a^2 + c^2$ and $b^2 + d^2$ is
 - (a) ad/dc
- (b) ab + cd
- (c) a/b + d/c
- (d) $b^2/a^2 + d^2/c^2$
- 2.A cat takes 5 leaps for every 4 leaps of a dog, but 3 leaps of the dog are equal to 4 leaps of the cat. What is the ratio of the speed of the cat to that of the

dog?

- (a) 13:14
- (b) 15:11
- (c) 17:15
- (d) 15:16

PARTNERSHIP

- 1.A, B and C invested their capital in the ratio 5:6 : 8. At the end of the business they received the profits in the ratio 5:3:1. Find the ratio of time for which they contributed their capital.
 - (a) 11:9:7
- (b) 13:18:8
- (c) 5:6:8
- (d) 8:4:1
- 2. Three vessels whose capacites are as 5:3:2 are completely filled with milk mixed with water. The ratio of milk and water in the mixture of vessels are as 3:2, 2:1 and 3:1 respectively. Find the percentage of water in the new mixture obtained when 1/3rd of first, 1/2 of second and 2/3rd of first, 1/2 of second and 2/3rd of the third vessels as taken out and mixed together.
 - (a) 60%
- (b) 52%
- (c) 18% (d) 3.33%

PROBLEMS ON AGES

- 1. The sum of the present ages of a father and his son is 60 years. Six years ago, father's age was five times the age of the son. After 6 years, son's age will be:
 - (a) 15 years
- (b) 16 years
- (c) 19 years
- (d) 20 years
- 2. The total age of A and B is 12 years more than the total age of B and C. C is how many years vounger than A?
 - (a) 12
- (b) 26
- (c) C is elder than A (d) None of these

PERCENTAGE

1.A scored 30% marks and failed by 15 marks. B scored 40% marks and obtained 35 marks more than those required to pass. The pass percentage is:

(a) 33%

(b) 40%

(c) 34%

(d) 48%

2. The price of a table is Rs. 400 more than that of a chair. If 6 tables and 6 chairs together cost Rs. 4800, by what percent is the price of the chair less than that of the table?

(a) 66.9%

(b) 60%

(c) $66\frac{2}{3}\%$

(d) 44%

PROFIT AND LOSS

1.On selling a chair at 7% loss and a table at 17% gain, a man gains Rs.296. If he sells the chair at 7% gain and the table at 12% gain, then he gains Rs.400. The actual price of the table is:

(a) Rs. 2100

(b) Rs. 1900

(c) Rs. 2200

(d) Rs. 2400

2.A shopkeeper offers 2.5% discount on cash purchases. What cash amount would Rohan pay for a cycle, the marked price of which is Rs. 650?

(a) Rs. 633

(b) Rs. 633.75

(c) Rs. 635

(d) Rs. 750

TIME AND WORK

1.If 12 men and 16 boys can do a piece of work in 5 days; 13 men and 24 boys can do it in 4 days, then the ratio of the daily work done by a man to that of a boy is:

(a) 2:1

(b) 3:1

(c) 3:2

(d) 6:7

2.4 men and 6 women can complete a work in 8 days, while 3 men and 7 women can complete

it in 10 days. In how many days will 10 women complete it?

(a) 55 days

(b) 40 days

(c) 45 days

(d) 60 days

TIME AND DISTANCE

1.If a train runs at 40 kmph, it reaches its destination late by 11 minutes but if it runs at 50 kmph, it is late by 5 minutes only. The correct time for the train to complete its journey is:

(a) 13 min.

(b) 17 min.

(c) 19 min.

(d) 22 min

2.A man covered a certain distance at some speed. Had he moved 3 kmph faster, he would have taken 40 minutes less. If he had moved 2 kmph, slower, he would have taken 40 minutes more. The distance (in km) is:

(a) 353

(b) 368

(c) 372

(d) 40

PROBLEMS ON TRAINS

1.A train travelling at 48 kmph completely crosses another train having half its length and travelling in opposite direction at 42 kmph, in 12 seconds. It also passes a railway platform in 45 seconds. The length of the platform is:

(a) 400 m

(b) 455 m

(c) 560 m

(d) 660 m

2.Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is:

(a) 2:3

(b) 3 : 2

(c) 3:4

(d) 4:5

ALLIGATION OR MIXTURE

1. Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1:1:2. If the mixture is worth Rs. 153 per kg, the price of the third variety per kg will be:

- (a) Rs. 187
- (b) Rs. 172
- (c) Rs. 175.50
- (d) Rs. 180
- 2.A merchant has 1000 kg of sugar, part of which he sells at 8% profit and the rest at 18% profit. He gains 14% on the whole. The quantity sold at 18% profit is:
 - (a) 460 kg
- (b) 660 kg
- (c) 600 kg
- (d) 640 kg

BOATS AND STREAMS

- 1.A boat takes 90 minutes less to travel 36 miles downstream than to travel the same distance upsteam. If the speed of the boat in still water is 10 mph, the speed of the steam is:
 - (a) 2 mph
- (b) 4.5 mph
- (c) 5 mph
- (d) 4 mph
- 2.A man rows to a place 48 km distant and back in 14 hours. He finds that he can row 4 km with the stream in the same time as 3 km against the stream. The rate of the steam is:
 - (a) 1 km/hr
- (b) 3 km/hr
- (c) 1.8 km/hr
- (d) 6 km/hr

SIMPLE INTEREST

- 1. How long will it take a sum of money invested at 5% p.a. S.I. to increase its value by 40%?
 - (a) 3 years
- (b) 6 years
- (c) 11 years
- (d) 8 years
- 2.A sum of money becomes $\frac{7}{6}$ of itself in 3 years at a certain rate of simple interest. The rate per annum is:
 - (a) 6%
- (b) $6\frac{5}{9}\%$
- (c) 18%
- (d) $5\frac{5}{9}\%$
- COMPOUND INTEREST

- 1.A man borrows Rs. 12,500 at 20% compound interest. At the end of every year he pays Rs. 2000 as part repayment. How much does he still owe after three such instalments?
 - (a) Rs. 14.000
 - (b) Rs. 13,684
 - (c) Rs. 15,600
- (d) None of these
- 2.A sum of money is borrowed and paid back in two annual instalments of Rs. 882 each allowing 5% compound interest. The sum borrowed was:
 - (a) Rs. 1900
- (b) Rs. 1640
- (c) Rs. 1680
- (d) Rs. 2000

AREA

- 1.A housing society has been allotted a square piece of land measuring 2550.25 sq. m. What is the side of the plot?
 - (a) 52.65 m
- (b) 50.5 m
- (c) 50.65 m
- (d) 50.15 m
- 2. The cost of cultivating a square field at the rate of Rs. 135 per hectare is Rs. 1215. The cost of putting a fence around it at the rate of 75 paise per metre would be
 - (a) Rs. 480
- (b) Rs. 815
- (c) Rs. 900
- (d) Rs. 1900

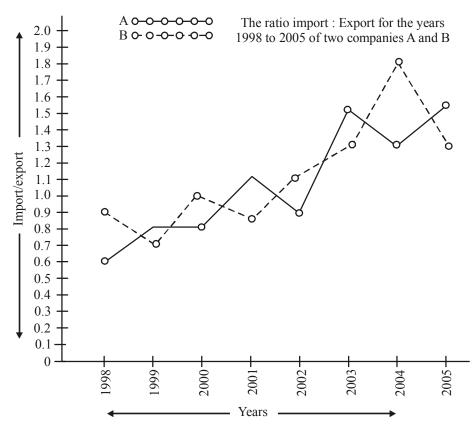
VOLUME AND SUFACE AREA

- 1.A cuboidal block of 6 cm \times 9 cm \times 12 cm is cut up into an exact number of equal cubes. The least possible number of cubes will be:
 - (a) 6
- (b) 11
- (c) 24
- (d) 32
- 2.The size of a wooden block is 5 × 10 × 20 cm. How many such blocks will be required to construct a solid wooden cube of minimum size?
 - (a) 6
- (b) 12
- (c) 12
- (d) None of these

DATA INTERPRETATION

Q. No. 1-2: The graph shows the ratio $\frac{\text{Import}}{\text{Export}}$ of

two companies, A and B, over the years. Study the graph and answer the questions.



- 1.In how many of the given years were the imports of company A more than its exports?
 - (a) 7
- (b) 4
- (c) 3
- (d) 5
- 2.In how many of the given years were the exports of company B more than its imports?
 - (a) 3
- (b) 2
- (c) 5
- (d) 1

General Mental Ability

ALPHABET TEST

- 1.If each of the vowels in the word BREAK is kept unchanged and each of the consonants is replaced by the next letter in the English alphabet, how many meaningful words can be formed with the new letters using each letter only once in each word?
 - (a) None
- (b) One
- (c) Two
- (d) Three
- 2.How many meaningful words can be made by changing only the consonants in the word MEAN so that each of the consonants is replaced by the previous letter in the English alphabet, by using each letter only once in each word?
 - (a) One
- (b) Two
- (c) Three
- (d) Four

LOGICAL SEOUENCE OF WORDS

- 1. 1. Presentation
 - 2. Recommendation
 - 4. Discussion
 - (a) 3, 5, 1, 4, 2
 - (c) 5, 3, 1, 2, 4
- 2. 1.Cutting
 - 3. Vegetable
 - 5. Cooking
 - (a) 1, 2, 4, 5, 3
 - (c) 4, 3, 1, 5, 2
- (b) 3, 2, 5, 1, 4
- (d) 5, 3, 2, 1, 4

3. Arrival

5. Introduction

(b) 3, 5, 4, 2, 1

(d) 5, 3, 4, 1, 2

2. Dish

4. Market

CODING-DECODING

- 1.In a certain code language, 'come now' is written as 'ha na'; now and then' is written as 'pa da na' and 'go then' is written as 'sa pa'. How is 'and' written in that code language?
 - (a) sa
- (b) pa
- (c) na (d) None of these
- 2.In a certain code language 'pit ne' means 'come here', 'ne ta ja' means 'come and go' and 'ja sa re' means 'you and me'. What does 'ta' means in that code language?
 - (a) come
- (b) and
- (c) here
- (d) go

BLOOD RELATION

- 1. Which of the following pairs is the parents of the couple?
 - (a) A B
- (b) B C
- (c) A F
- (d) C F
- 2. How many female members are there in the family?
 - (a) Two
- (b) Three
- (c) Four
- (d) cannot be determined

DIRECTION SENSE TEST

1.A child is looking for his father. He went 90 metres in the East before turning to his right. He went 20 metres before turning to his right again to look for his father at his uncle's place 30 metres from this point. His father was not there. From here he went 100 metres to the North before meeting his father in a street. How far did there

son meet his father from the starting point?

- (a) 80 metres
- (b) 100 metres
- (c) 140 metres
- (d) 260 metres
- 2. The door of Aditya's house faces the East. From the back side of his house, he walks straight 50 metres, then turns to the right and walks 50 metres again. Finally, he turns towards left and stops after walking 25 metres. Now, Aditya is in which direction from the starting point?
 - (a) South-east
- (b) North-east
- (c) South-west
- (d) North-west

ALPHA-NUMERIC SEQUENCE TEST

- 1.If every third letter/number starting from the right replaces successive days of the week starting from Monday, then which letter will replace Thursday?
 - (a) A
- (b) F
- (c) S
- (d)Z
- 2.If every alternate letter/number is dropped starting from E onwards, then which letter/number will be the second to the left of the tenth letter/number from the left?
 - (1) A
- (b) B
- (c) Q
- (d) V

NUMBER. RANKING AND TIME SEQUENCE TEST

- 1.If 30th January 2003 was Thursday, what was the day on 2nd March, 2003?
 - (a) Tuesday
- (b) Thurdsay
- (c) Saturday
- (d) Sunday
- 2.If every second Saturday and all Sundays are holidays in a 30 days month beginning on Saturday, then how many working days are there in that month?
 - (a) 20
- (b) 21
- (c) 22
- (d) 23

MATHEMATICAL OPERATIONS

- 1.If $a^2x \propto byz$, $czx \propto b^2y$ and $c^2z \propto axy$, then
 - (a) $abc \propto xyz$
- (b) $abc \beta xyz$
- (c) $abc \gamma xyz$
- (d) $abc \gamma xyz$
- 2. If $6x \alpha$ and $2y \beta$ 3z, then.
 - (a) $12x \beta 3z$
- (b) $4x \beta 3z$
- (c) 2xyz
- (d) $4x \propto 3z$

SYLLOGISM

1. **Statements:** All men are parrots.

Some parrots are crows.

All crows are hens.

Conclusions: I. Some men are hens

II. No man is hen

2. **Statements:** Some papers are dogs.

Some dogs are windows.

All windows are trees.

Conclusions: I. Some windows are papers.

II. Some papers are trees.

DATA SUFFICIENCY

- 1. Five persons A, B, C, D and E are sitting in a row. Who is sitting in the middle?
 - I. B is between E and C.
 - II. B is to the right of E.
 - III. D is between A and E.
 - (a) Only I and II
- (b) Only II and III
- (c) Only I and III
- (d) All I, II and III
- 2. Who is the tallest among six boy P, T, N, D, Q and R?
 - I. P is taller than D and N but not as tall as T.
 - II. R is taller than Q but not as tall as T.
 - III. O is not taller than T and R.
 - (a) Only I and II (b) Only II and III
 - (c) Only I and III
 - (d) All I, II and III

English Grammar & Comprehension

PASSAGE 1

Modern civilization has some serious defects. In democratic countries men are equal before the law and have a voice in deciding how and by whom they shall be governed. But the sharing out of money-which means the sharing out of food and clothing and books and so on is still very unfair. While some few people live in luxury, many have not enough to eat and drink and wear. Even in the finest of the world's cities thousands of people live in dreadful surroundings. There are many families of five and six person who live in a single room: they sleep and dress and wash and eat their meals in the same room: in the same room they are born and in the same room they die. And they live like this not for fun but because they are too poor to afford another room.

A still greater danger comes from war. Twice already in my life-time from 1914 to 1918 and from 1939 to 1945, almost the whole of the world has been torn by war. Moreover, in the conditions of the present day any war that starts anywhere is more and more likely to spread everywhere. What is still more

tragic is that man has now discovered how to release for purposes of war the colossal forces locked up in the atom. The leading nations of the world are making atom bombs, which if another war came, would certainly be widely used. Nobody knows what the effect of dropping atom bombs on a large scale would be, but it is quite possible that the total destruction of the civilization of the west, and even of other parts of the world might ensue.

Yet another great defect of our civilization is that it does not know what to do with its knowledge. Science has given us powers fit for the gods yet we use them like small children. For example, we do not know how to manage our machines. Machines were made to be man's servants: yet he has grown so dependent on them that they are in a fair way to become his masters.

- 1. The characteristic feature of democracy is that
 - (a) People enjoy unrestricted freedom to do what they like
 - (b) All the people belong to one party or another
 - (c) People are equal in the eyes of law and have a role to play in the appoint-ment of their rulers
 - (d) Government does everything for the

people

- (e) People govern themselves directly
- That there is unfair and uneven distribution of food and clothing and houses and so on is the drawback of
 - (a) The modem democracy
 - (b) The modem socialistic system
 - (c) The present communistic pattern of life
 - (d) The modem civilization
 - (e) The constitutions of modem countries
- 3. The injustice emanating from the unequal distribution of the necessities of life like, food, clothing and shelter
 - (a) Is found only in the societies of the East
 - (b) Is found only in the societies of the West
 - (c) Always led to bloody wars in history
 - (d) Is traceable everywhere in the world
 - (e) Has not yet drawn attention anywhere in the world.
- 4. Besides inequalities there are according to the author other things as well which pose a veritable danger to the modem civilization. One of them is war, the other is
 - (a) Man's dependence on machines
 - (b) Deterioration of moral standards
 - (c) The loosening of family ties
 - (d) The growing sense of crass materialism
 - (e) Man's shakable faith in peace
- 5. In the conditions of the present day if a war starts somewhere, it has the tendency
 - (a) To remain localized
 - (b) To become more cruel than ever before
 - (c) To spread everywhere
 - (d) To unsettle balance of power in the world
 - (e) To contract in dimensions
- 6. "Man has now discovered how to release for purposes of war the colossal forces locked up in the atom" means that
 - (a) Immense possibilities of good are stored

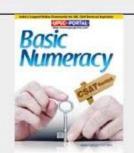
- up in an atom
- (b) Destructive powers of immense proportions are stored up in the atom and they are likely to. be released if war starts
- (c) Man knows the secret of putting the atoms to the best use
- (d) Atomic power has dehumanized mankind
- (e) There are yet immense' possibilities of man discovering new sources of powers of destruction
- 7. What is quite possible if in a future war atom bombs are dropped on large scale?
 - (a) The nation that is attacked will undergo untold suffering and misery
 - (b) The nation that drops them on its enemy will itself be engulfed in the destructive fold of war
 - (c) The leading nations of the world will realize the destructive capacity of the atomic warfare and will come round to solve their disputes by mutual talks and negotiations
 - (d) The peace loving nations will at once start conferring with one another to find out solution to the disputes of the waning nations
 - (e) The total destruction of the civilization of the West and even of other parts of the world might materialize.
- 8. "Science has given us powers fit for the gods, yet we use them like small children" means that
 - (a) Science has blessed us with divine powers but our mental capacities are so undeveloped that we don't know their use
 - (b) Science has invented and discovered many things due to which great powers lie at the disposal of man which should

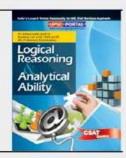
- be used for the welfare of mankind but we make use of them in an irresponsible manner diminishing their potential of contributing to the good of mankind.
- (c) Science has placed at the disposal of man great powers which were in the past granted only to the gods. Unhappily we do not know their use
- (d) All the above three are correct
- (e) None of the above is correct
- 9. How can machines be man's servants?
 - (a) If man makes limited use of them
 - (b) If the machines are made use of only as aids to get things done and man should not be overdependent on them
 - (c) If man knows how to make them and repair them if faults develop in them
 - (d) Only when man asserts his superiority
 - (e) If man is careful about their proper upkeep
- 10. Which of the following may be the most suitable heading of the above passage?
 - (a) Man and Machine
 - (b) Atomic Power for Destruction or Construction
 - (c) Defects of the Modem Civilization
 - (d) The Curses of Science
 - (e) Science in the Service of Man

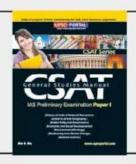
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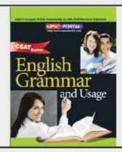


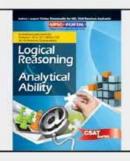




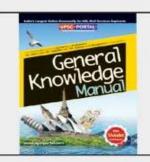




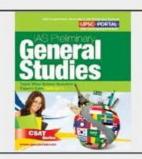




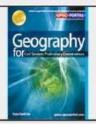


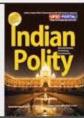


















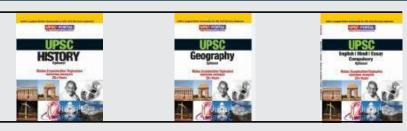


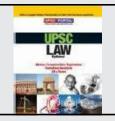
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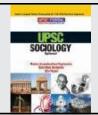
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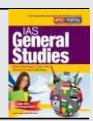
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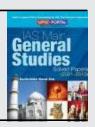




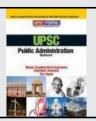


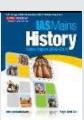












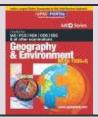
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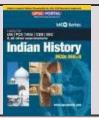
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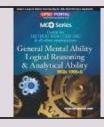


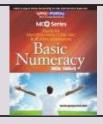


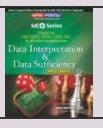












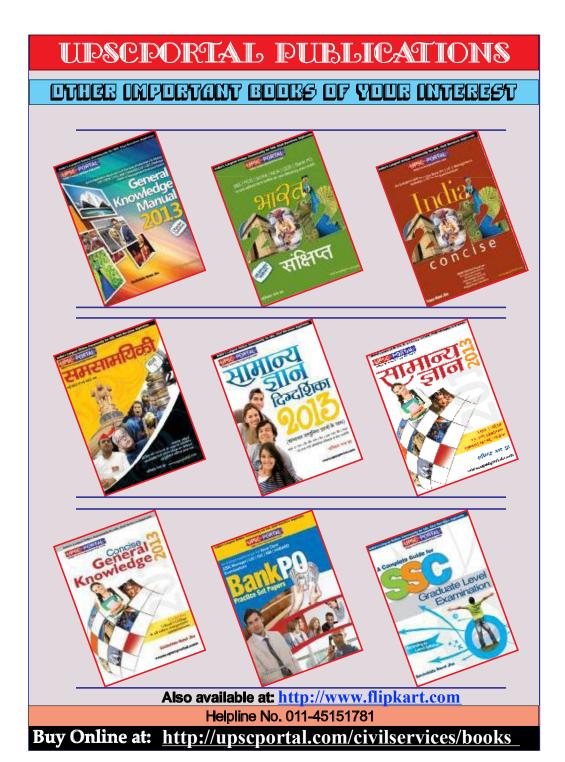




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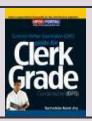
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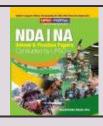


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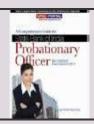














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