CampBUZZ

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A *Monthly* of HARDAYAL TECHNICAL CAMPUS
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INSIDE INSIDE

Message from the Secretary's Desk...

It gives me immense pleasure to learn that Hardayal Technical Campus impart knowledge and hone skills in a very conducive academic environment to make our young aspiring students competent and motivated professional who intend reaching out to the world. We promote freedom of thought, cultivate vision and encourage growth of knowledge with values and a sense of responsibility to harness them for the welfare of the society. An unfettered spirit of knowledge exploration, academic integrity, social accountability, and promotion of intellectual excellence make us distinct from the rest.

I convey my heart felt welcome to all the aspirants ready to walk down the crucial lane of life and yearn that yours ensuing period here will be orchestrated by hope of high voltage, heritage, of happiness, pampering prosperity and series of scintillating successes the like of which were neither tasted nor witnessed ever before.

We strive to provide professional education in the field of Engineering & Technology, Architecture and Management within a pleasant and intellectually stimulating environment along with exposure of latest and advanced techniques supplemented with tremendous performance of our faculty.

The ground on which this Campus has attained this accomplishment is founded on the intrinsic worth of adherence to the sole aim of carving every mind, not caring of their background, with dedication, devotion and enthusiasm. Resulting, Owing to these sincerest efforts college succeed to register swift and steady growth on academic fronts.

Our perfect 'Success Mantra' stresses on taking in its sweep passion for the desired degree of knowledge, generating confidence of high voltage, attainment of mental and emotional stability and over and above all arousing unswerving conviction in the significance of 'strategy' without which the direction to the destination remains bafflingly blurred. To achieve this we streamline the academic resources, concretize our plans and confidently climb on the tidal wave of success.

We try incessantly to achieve this through state-of-the-art infrastructure, picturesque & inspiring setting and devoted team of faculty-members and administrators. The learning ambience at all the constituting Institutions is perfectly suited for all-round growth and academic excellence.

Apart from all this, the hostel facilities in the campus premises are provided with utmost care and attention so that the students can feel secure and at ease. Upon the completion of their tenure at our institutions, students metamorphose into competent professionals. They are moulded in such a way so as to have great careers, thus achieving remarkable success as professionals.

May God Bless You. God Speed.

Sachin Yadav, CEO & Secretary

DESIGNING A SAFE AND SMART OUTDOOR SPACE

In the last few years, home trends have been turned inside out – literally. Creating outdoor living spaces is high on homeowners' to-do lists, as people are looking to improve the homes they have instead of moving to a new one in a challenging housing market.

A recent survey shows people who are moving the indoors out want these spaces to be functional, efficient and sustainable. Some of the most popular outdoor living features are also some of the most basic: more than 96 percent of people surveyed rated exterior lighting as somewhat or very popular, followed by fire pits and fireplaces (94.2 percent), seating and dining areas (94.1 percent), grills (93.8 percent) and installed seating (89.5 percent). Also receiving high marks for popularity were low maintenance landscapes, native plants, water-efficient irrigation and food and vegetable gardens.

Risk Realities Along with the joys of outdoor living come safety hazards. Outdoor room activities account for a large number of unintentional injuries, accidents and even deaths. For example:

- Eight thousand meals cooked on grills erupt into structure fires every year.
- Outdoor lighting can carry up to 120 volts from your house if it is not safely converted to a low-voltage outdoor level of a controlled 12 volts.
- Fire pits can be sources of contact burns as well as injuries from flames.

Now for the good news: there are lots of easy ways to help safeguard your family in the backyard. Just check these recommendations off your list and get out there and enjoy it!

- Look for the UL Mark on outdoor appliances such as ceiling fans, outdoor refrigerators and outdoor TVs and be sure they are rated for outdoor use; otherwise they may pose a risk of fire or shock.
- Check that landscape or decorative lighting is UL listed and is rated for outdoor use; otherwise it may pose a risk of fire or shock.
- Choose appliances which have the Energy Star® certification mark for more energy efficiency and environmental friendliness.
- Keep a fire extinguisher near the fire pit or grill.
- Never leave a burning fire pit or grill unattended, especially if children are nearby.
- Coals can heat up to 1,000 degrees F, so dispose of charcoal away from kids and pets and cool it down with a hose.

Pawan Sharma
System Administrator

FRUITS ARE THE BEST MEDICINE

That fruits are the best medicine is a well known fact. We also know that a cup of fruit juice a day is sure to guarantee a clear complexion. Fruit facials have been there for at least a decade now. But with people getting more wary of effect of chemicals on the skin, majority of them are now resorting to using something from their own kitchen. Besides the fact that they hydrate and rejuvenate your skin, the very smell of a fruit on your face is quite de-stressing. Unlike the chemical beauty treatments, fruits are cost-effective, natural and also bring a visible difference. Here are a few fruits and their properties, choose what suits you best!

Banana: This is one fruit that's abundantly available in India all through the year. We know it's a good source of iron, magnesium and potassium and helps reduce menstrual cramps. The effect of banana on skin too is not something that can be ignored. Banana is rich in vitamin A, B and E and hence works as an anti-aging agent. A fresh mashed banana facial can do wonders to your skin.

Lemon: Lemon juice is an important ingredient in most Indian recipes. This is also a fruit of all seasons and almost always finds place on your kitchen shelf or refrigerator. With its vitamin C content, its juice will keep your skin beautiful. A glass of warm water with a tsp of honey and a dash of lemon juice on an empty stomach every morning is a great skin cleanser. With its astringent properties, it can be used to lighten the skin tone and also diminish acne scars. Rub the inside of a lemon peel on your elbow remove dark spots. Mix lemon and honey and use it as a natural bleach on your skin.

Apple: An apple a day keeps the doctor away is cliched, but its health benefits are undisputable. Apple's antioxidant property prevents cell and tissue damage. Studies by nutritionists have shown that apples contain abundant amounts of elastin and collagen that help keep the skin young. Applying a mixture of mashed apple, honey, rose water and oatmeal can act as a great exfoliating mask on your skin.

Orange: Rich in vitamin C that improves skin texture. Like apple, orange too contains collagen that slows skin aging process. Rub the insides of orange on your skin to tighten the skin. Oranges can be dried and powdered and used as a natural scrub. Like lemon, oranges too help clear skin blemishes.

Mangoes: Rightly called the king of fruits for not just its taste but also for health benefits. The soft pulpy fruit has an amazing effect on skin too. Rich in vitamin-A and antioxidants, it fights skin aging, regenerates skin cells and restores the elasticity of skin.

BEST ARTICLES

Pradeep Kr Chaudhary
B Tech (CSE), II Year

THE IMPORTANCE OF COMPUTER AND INTERNET

The internet is something most of us take for granted. We look up recipes, stay connected to friends and family, and research many different topics. More and more devices such as phones, e-readers, and MP3 players connect to the internet and many students use the internet on a regular basis to do research for papers and other school assignments. In addition to the internet, many students use programs such as word processing programs, drawing programs and photo shop programs.

For a whole generation of parents and grandparents that number may not seem too alarming, after all, they managed to go to school, even to college and advanced degrees without internet access. But the world has changed. In years past, one expense that many parents incurred early in their child's life was the purchase of an encyclopedia set. As the computer and internet became a household fixture, many families replaced the purchase of encyclopedias with internet access. It could be argued that students with computer and internet access at home have an unfair advantage over students who do not have that access.

Consider the student who does have internet access at home. With a five page report due, that student sits in their own home, pulls up the internet on the computer, and at their fingertips have thousands of sources from which to gather information. After collecting his or her data, this student types in the report, giving little care to the correct spelling or grammar, since both of those are easy enough to fix with an adequate word processing program. Finally, the corrected research paper is printed out and tucked into a folder to be turned in.

In comparison the student who does not have computer and internet access at home has to find a source to gather information from for the paper. The library might be a good source for that, but first the student must secure a ride to the library. Some students might then wait in line for computer time at the library, with hopes of getting time to enter their report and print it out. However, computer resources at the library are limited, and not everyone will have the time or opportunity to type in their report. This means that this student will then spend additional time hand-writing the report. In addition, this student will not have the benefit of grammar and spell checker software.

Over the course of a student's elementary, middle and high school years this disadvantage will probably be cumulative and may also lead to lower self-esteem, as grades may slip, or at best require more work, and longer hours to remain competitive with other students who have technological advantages such as home computer and internet access.

In a time when we are blaming to others for poor performance, and in states that score low in academics, maybe one way to improve the standing of students and the states in general is to look at the gap between the students who have home computer and internet access and those who do not. It is beyond the scope of this writing to suggest a solution to this dilemma, however it is interesting to consider that home computer and internet access might contribute to improved grades, and ultimately high academic performance within a state.

Jitendra Karira
Astt Prof, School of Engg

BLUE OCEAN STRATEGY

The metaphor of red and blue oceans describes the market universe. Red oceans are all the industries in existence today – the known market space. In the red oceans, industry boundaries are defined accepted and the competitive rules of the game are known. Here companies try to outperform their rivals to grab a greater share of product or service demand. As the market space gets crowded, prospects for profits and growth are reduced. Products become commodities or niche and cutthroat competition turns the ocean bloody. *Blue oceans*, in contrast, denote all the industries not in existence today – the unknown market space, untainted by competition. In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid. In blue oceans, competition is irrelevant because the rules of the game are waiting to be set. Blue ocean is an analogy to describe the wider, deeper potential of market space that is not yet explored. The cornerstone of Blue Ocean Strategy is 'Value Innovation'. A blue ocean is created when a company achieves value innovation that creates value simultaneously for both the buyer and the company. The *innovation* (in product, service, or delivery) must raise and create value for the market, while simultaneously reducing or eliminating features or services that are less valued by the current or future market. Blue ocean strategy, on the other hand, is based on the view that market boundaries and industry structure are not given and can be reconstructed by the actions and beliefs of industry players. This is what the authors call "reconstructions view". Assuming that structure and market boundaries exist only in managers' minds, practitioners who hold this view do not let existing market structures limit their thinking. To them, extra demand is out there, largely untapped. The crux of the problem is how to create it. This, in turn, requires a shift of attention from supply to demand, from a focus on competing to a focus on value innovation – that is, the creation of innovative value to unlock new demand. This is achieved via the simultaneous pursuit of differentiation and low-cost. As market structure is changed by breaking the value/cost tradeoff, so are the rules of the game. Competition in the old game is therefore rendered irrelevant. By expanding the demand side of the economy new wealth is created. Such a strategy therefore allows firms to largely play a non–zero-sum game, with high payoff possibilities.

Mukesh Kr Verma
MBA, II Year

TURNING A FLAW INTO A FEATURE

Once upon a time there was a water-bearer in a village who had two large pots, each hung on each end of a pole which he carried across his neck. One of the pots had a crack in it, and while the other pot was perfect and always delivered a full portion of water at the end of the long walk from the stream to the master's house, the cracked pot arrived only half full. For a full two years this went on daily, with the bearer delivering only one and a half pot full of water in his master's house. of course, the perfect pot was proud of its accomplishments, perfect to the end for which it was made. But the poor cracked pot was ashamed of its own imperfection, and miserable that it was able to accomplish only half of what it had been made to do. After two years of what it perceived to be a bitter failure, it spoke to the water- bearer one day by the stream. "I am ashamed of myself, and I want to apologize to you." "Why?" asked the bearer. "What are you ashamed of ?" "I have been able, for these past two years, to deliver only half my load because this crack in my side causes water to leak out all the way back to your master's house. Because of my flaws, you have to do all of this work and you don't get full value from your efforts, " the pot said. The water-bearer felt sorry for the old cracked pot, and in his compassion he said, "As we return to the master's house, I want you to notice the beautiful flowers along the path." Indeed, as they went up the hill, the old cracked pot took notice of the sun warming the beautiful wild flowers on the side of the path, and this cheered it some. But at the end of the trail, it still felt bad because it had leaked out half its load, and so again it apologized to the bearer for its failure. The bearer said to the pot, "Did you notice that there were flowers only on your side of your path, but not on the other pot's side? That's because have always known about your flaw, and I took advantage of it. I planted flower seeds on your side of the path, and every day while we walk back from the stream, you've watered them. For two years I have been able to pick these beautiful flowers to decorate my master's table. Without you being just the way you are, he would not have this beauty to grace his house." The moral of this story: Each of us has our own unique flaw. But it's the cracks and flaws we each have that make our lives together so very interesting and warding. You've just got to take each person for what they are and look for the good in them.

Priyanka Dubey
Asst Prof, School of Engg

Happening.....@ June 2012

Green Lawn Developed

New Plantation

Mound at Campus

Campus visited by Students

Students counseling

Enquiry at Reception

Campus Visited By Prof. A K Khare

QUEUEING THEORY- A PROFESSIONAL TOOL IN DECISION MAKING

We have seen that as a system gets congested, the service delay in the system increases. A good understanding of the relationship between congestion and delay is essential for designing effective congestion control algorithms. Queuing Theory provides all the tools needed for this analysis. This article will focus on understanding the basics of this topic. Communication Delay : Before we proceed further, lets understand the different components of delay in a messaging system. The total delay experienced by messages can be classified into the following categories: Processing Delay: This is the delay between the time of receipt of a packet for transmission to the point of putting it into the transmission queue. On the receive end, it is the delay between the time of reception of a packet in the receive queue to the point of actual processing of the message. This delay depends on the CPU speed and CPU load in the system. Queuing Delay : This is the delay between the point of entry of a packet in the transmit queue to the actual point of transmission of the message. This delay depends on the load on the communication link. Transmission Delay :This is the delay between the transmission of first bit of the transmission of last bit. This delay depends on the speed of the communication link. Propagation Delay :This is the delay between the point of transmission of the last bit of the packet to the point of reception of last bit of the packet at the other end.This delay depends on the physical characteristics of the communication link. Retransmission Delay: This is the delay that results when a packet is lost and has to be retransmitted. This delay depends on the error rate on the link and the protocol used for retransmissions. Queueing System Classification we will have to dig deeper into characteristics of a queueing system that impact its performance. For example, queueing requirements of a restaurant will depend upon factors like:How do customers arrive in the restaurant? Are customer arrivals more during lunch and dinner time (a regular restaurant)? Or is the customer traffic more uniformly distributed .How much time do customers spend in the restaurant? Do customers typically leave the restaurant in a fixed amount of time? Does the customer service time vary with the type of custome. How many tables does the restaurant have for servicing customers.The above three points correspond to the most important characteristics of a queueing system. They are explained below: Arrival Process : The probability density distribution that determines the customer arrivals in the system In a messaging system, this refers to the message arrival probability distribution. Service Process : The probability density distribution that determines the customer service times in the system.In a messaging system, this refers to the message transmission time distribution. Since message transmission is directly proportional to the length of the message, this parameter indirectly refers to the message length distribution. Number of servers available to service the customers. In a messaging system, this refers to the number of links between the source and destination nodes based on the above characteristics, queueing systems can be classified by the following convention: Applications of Queueing Theory Queueing Theory has a wide range of applications.

(1) Computer scheduling,

(2) Airports - runway layout, luggage collection, shops, passport control etc.

(3) Hospital appointment bookings ,

(4) Bus scheduling , Hospital appointment bookings, Printer queues, Minimising page faults in computing.

Dr Mahesh Chandra
Asso Prof, School of Engg

EAT MANGOES TO LOSE WEIGHT!

The summer might be a good time to lose some weight and the king of fruits, mango, helps in losing weight. Mangoes are fleshy and a snack of fresh mangoes is usually helpful in keeping one full. "Mangoes have a high content of beta carotene and rank among the top providers of beta carotene. However they are also a great source of nutrients in the concentrated form. In order to reduce the consumption of calories, mangoes are a very good choice". Beta carotene is also known to reduce the risk of certain forms of cancer.

To get the right amount of nutrition not too many mangoes need to be consumed. A single fruit is capable of providing of almost a day's supply of Vitamin C to the body. It also helps in making bones stronger since it contains minerals, calcium and magnesium as well as B vitamins. They are also rich in a carotenoid called lycopene, which is an effective antioxidant.

In order to lose weight, mangoes can form an important part of the diet however it has to be coupled with other fruits and a complete meal, only after consultation with a nutritionist. Not only losing weight, daily consumption of mangoes make the skin complexion brighter and makes skin softer.

Dr Amit Parashar
Asso Prof, School of Engg

Note : Choose the right option. Mark(s) of each question is mentioned in the bracket at the end.

Q.1. In a Bank, 20 customers on the average are served by a cashier in an hour. And the service time is exponentially distributed. (1×4= 4)

1.1 The probability that it will take more than 10 minutes to serve a customer will be
(i) .0357min (b).0257min (c) .0347min (d).0317min

1.2 The probability that a customer will free within 4 minutes will
(a) 0.775 min (b).0257min (c) .736min (d).776min

1.3 In HTC Campus 2 students comes for visit/ minute. The average number of arrival during 5 minutes will be
(a) 12 (b)15 (c) 10 (d) 26

1.4 The probability that no arrival will occur during the next 30 seconds
(a) .367 sec (b) .366 sec (c) .377 sec (d) .369 sec

Q.2. In PNB there is one cashier at its counter. 9 customers arrive on an average every 5min while the cashier cans serve10 customers in 5 minutes. Then (1×4= 4)

2.1 Average number of customers in the system will be
(a) 6 (b) 7 (c) 9 (d) 8

2.2 Average number of customers in the queue will be
(a) 6.1 (b) 8.1 (c) 9 (d) 8

2.3 Average time a customer spends in the system will be
(a) 5min (b) 4min (c) 3min (d) 9min

2.4 Average time a customer waits before being served will be
(a) 5min (b) 4.5min (c) 3min (d) 9min

Q.3. Arrival rate of telephone calls at a telephone booth are according to passion distribution, with an average time of 9 minutes between two consecutive arrivals. The length of telephone call is assumed to be exponentially distributed, with mean 3Min. (2×3= 6)

3.1 The probability that a person will arrive at the booth will have to wait is
(a) 0.33 (b) 0.21 (c) 0.9 (d) 0.8

3.2 The average queue length that is formed from time to time is
(a) 1.5 person (b) 1person (c) 2 person (d) 8.5 person

3.3 The fraction of a day that the phone will be in use will be
(a) 0.34 (b) 0.39 (c) 0.33 (d) 0.6

Q.4. Workers come to tool store room to receive special tools. (required by them) for accomplishing a particular project to them. The average time between two average two arrivals is 60 seconds And the arrivals are assumed to be in passion distribution. The avg service time (of the tool room attendant) is 40 second.(2×4= 8)

4.1 Average queue length will be
(a) 4/3worker (b) 2/3worker (c)1/3worker (d) 5/3 worker

4.2 Average length of non-empty queues will be
(a) 6worker (b) 4 workers (c) 5 workers (d) 3worker

4.3 Mean waiting time of an arrival will be
(a) 5/3 (b) 2/3min (c)1/3 min (d) 4/3min

4.4 Average waiting time of an a arrival of worker who waits will
(a) 3min (b) 2min (c)5 min (d) 7min

Q5. A typist at an office of a company receives on the average 20 letters per day for typing. The typist works 8 hours a day and it takes on the average 20 minutes to type a letter. The cost of a letter waiting to mailed is 80 paisa per hour and the cost of the equipment plus salary of the typist is Rs. 45 per day. (1×4= 4)

5.1 The typist utilization rate is
(a) 0.567 (b) 0.833 (c) 0.213 (d) 0.24 7

5.2 The average number of letters waiting to be typed is
(a) 0.567 (b) 4.17 (c) 0.253 (d) .24 3

5.3 The average waiting time needed to have a letter typed is
(a) 2hours (b) 5 hours (c) 9 hours (d) 10 hours

5.4 The average number of waiting letters to be mailed is
(a) 5 (b) 3 (c) 7 (d) 4

Q.6. Directions (6.1-6.5): Study the following table carefully to answer the questions given below it. Percentage of students passed over appeared from six States over the years in an admission test. (2×5= 10)

Year/State	A	B	C	D	E	F
2005	32	35	37	41	39	29
2006	45	26	29	37	43	37
2007	28	38	22	27	36	42
2008	36	42	49	38	29	45
2009	40	34	33	26	35	30
2010	24	29	47	33	41	36
2011	35	43	40	38	39	28

6.1. If the number of students appeared from each State in the year 2011 was 5000, approximately what was the average number of students qualified?
(a) 1810 (b) 1550 (c) 1380 (d) 1860

6.2. If in the year 2007, 18500 students appeared from State 'C' and 17200 students appeared from State 'E', what was the total number of students qualified from these two States together ?
(a) 10262 (b) 10444 (c) 10536 (d) 10833

6.3. If the number of students appeared from State A in 2006 was more than that in 2005 by 20%, what was the ratio of number qualified in the State A 2005 and 2006 respectively ?
(a) 4:9 (b) 16:27 (c) 5:6 (d) 32:45

6.4. If the number of students qualified from State 'D' in 2008 and 2009 were in the ratio of 2 : 3 respectively, what was the respective ratio of students appeared in these years?
(a) 4:9 (b) 16:27 (c) 5:6 (d) 32:45

6.5. If the average number of students qualified from State E for the given years was 532, what was the average number of students appeared ?
(a) 1420 (b) 1350 (c) 1422 (d) None of these

Q.7. Directions (7.1-7.5): Study the following table carefully to answer these questions. Production (in lakh tons) of a product by six companies over the given years. (2×5= 10)

Year/Company	2005	2006	2007	2008	2009	2010
A	487	565	648	734	848	765
B	522	378	725	673	729	695
C	746	483	679	499	685	720
D	398	526	498	580	617	732
E	415	680	840	689	780	637
F	632	775	580	720	670	746

7.1. Production of Company B in 2007, was what per cent of the total production of all the companies together for that year (rounded off to the nearest integer)?
(a) 17 (b) 20 (c) 22 (d) 18

7.2. During which year was the percentage increase/decrease in production from the previous year was the lowest for Company A?
(a) 2010 (b) 2006 (c) 2008 (d) 2007

7.3. What was the difference between the total production of Companies E & F (in lakh tons) in the given years ?
(a) 78 (b) 86 (c) 76 (d) None of these

7.4. Approximately what was the average production of all the six companies (in lakh tons) in the year 2006
(a) 590 (b) 550 (c) 570 (d) 450

7.5. What was the per cent fall in production of Company 'C' in 2008 over that in 2007 (rounded off to two digits after decimal)?
(a) 25.61 (b) 26.51 (c) 36.07 (d) 37.16

CampBUZZ

Kuldeep Singh
MBA, II Year

quiz: June, 2012

Solution

1.1 B ; 1.2 C ; 1.3 C ; 1.4 D ; 1.5 A ; 1.6 C ; 1.7 D ; 1.8 A ; 2.1 D ; 2.2 D ; 3.1 C ; 3.2 C ; 4.1 D ; 4.2 D ; 4.3 B ; 4.4 C ; 4.5 D ; 4.6 A