

CUET · PHYSICAL EDUCATION · CLASS XI · CODE 321

Tournaments and Competitions

CUET unit: Tournaments, Fixtures and International Competitions

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The logo for UniDrill, featuring the word "UniDrill" in a sans-serif font. "Uni" is in a light blue color, and "Drill" is in a light orange color. The logo is centered on a white background with a subtle shadow effect.

Snapshot

- Defines a tournament as a competition among different teams in a particular game/sport according to a fixed schedule where a winner is decided (p. 300).
- Classifies tournaments into four families — Knock-out (Elimination), League (Round Robin), Combination and Challenge — and lays down the formulae and procedures for drawing fixtures for each.
- Introduces critical formulae CUET loves to test: $N - 1$ matches in single knock-out, $N(N-1)/2$ in single league, $N(N-1)$ in double league, byes = next-power-of-2 minus N , $2N - 3$ matches in Consolation Type II.
- Covers procedure of giving byes, seeding/special seeding, cyclic/tabular/staircase methods for league fixtures, and combination tournament variants (Knock-out cum Knock-out, Knock-out cum League, League cum League, League cum Knock-out).
- Wraps with India-facing factual content on Olympic, Paralympic, Commonwealth, Asian, National Games, Inter University Tournaments and SGFI — a fertile zone for direct factual CUET MCQs.

Detailed Notes

2.1 Core concepts

- A tournament is a competition held among different teams in a particular game or sport according to a fixed schedule where a winner is decided (NCERT §Intro, p. 300).
- Types of tournaments: Knock-out / Elimination (Single Knock-out, Consolation Type I and II, Double Knock-out), League / Round Robin (Single League, Double League), Combination (Knock-out cum Knock-out, Knock-out cum League, League cum Knock-out, League cum League) and Challenge (Ladder, Pyramid) (NCERT §Intro, p. 300).
- Factors to weigh while deciding the type of tournament: the season, time of disposal, play fields and equipment, type of activity, officials, and finance/budget (NCERT §Intro, p. 300).
- Single Knock-out: defeated teams are eliminated immediately; total matches = $N - 1$ (e.g., for $N = 13$, matches = 12) (NCERT §Knock-out, pp. 300-301).

- Drawing fixtures: when teams = power of 2 (2, 4, 8, 16, 32, 64...) no byes are needed; if teams are not a power of 2, byes = next-higher power of 2 minus N (e.g., 13 teams \Rightarrow $16 - 13 = 3$ byes; 25 teams \Rightarrow $32 - 25 = 7$ byes) (NCERT §Method of Drawing Fixtures, p. 301).
- Half-distribution: Upper Half = $N/2$ and Lower Half = $N/2$ when N is even; for odd N, Upper Half = $(N+1)/2$ and Lower Half = $(N-1)/2$ (NCERT §Single Knock-out Fixture for 10/11 Teams, p. 302).
- Bye distribution between halves: for odd number of byes, Upper Half byes = $(Nb-1)/2$, Lower Half byes = $(Nb+1)/2$ — Lower Half gets the extra bye (NCERT §Fixture for 11 Teams, p. 302).
- Procedure of giving byes (order): Ist Bye — Bottom of the Lower Half; IInd Bye — Top of the Upper Half; IIIrd Bye — Top of the Lower Half; IVth Bye — Bottom of the Upper Half (NCERT §Procedure of giving byes, p. 303).
- Seeding is the sorting of strong teams and fitting them into the fixture so that strong teams do not meet in the earlier rounds; needed because a lots-only draw can lead to strong teams clashing early and weak teams reaching the semifinals (NCERT §Seeding, p. 303).
- Number of rounds depends on team strength: 5–8 teams \Rightarrow 3 rounds (2^3); 9–16 \Rightarrow 4 rounds (2^4); 17–32 \Rightarrow 5 rounds; 33–64 \Rightarrow 6 rounds; 65–129 \Rightarrow 7 rounds (NCERT §Seeding, p. 303).
- Merits of Single Knock-out: finishes quickly, economical, keen and intense matches due to fear of elimination; Demerits: a team may be eliminated by chance, drawing by lots alone risks strong teams meeting early, winners may have to wait for the next-round opponent (NCERT §Merits and Demerits, p. 304).
- Special Seeding: top players/teams are placed to enter directly at Quarter Finals or Semifinals; for 24 teams with 4 special seeds (1, 12, 13, 24), byes = $32 - (24 - 4) = 32 - 20 = 12$ byes (NCERT §Special Seeding, p. 304).
- Consolation Tournament: defeated teams get another chance for subsidiary honours; superior to plain knock-out because more matches are played; Type I — first-round losers play among themselves; Type II — every loser of the regular round plays in the consolation round; total matches in Type II = $2N - 3$ (NCERT §Consolation Tournament, pp. 306-309).
- Double Knock-out / Double Elimination: a team must be defeated twice to be eliminated; regular winner plays the consolation winner to decide the champion; total matches = $(2N - 2)$ or $(2N - 1)$; it is an extension of Consolation Type II and is superior to single knock-out and consolation because it decides the true winners (NCERT §Double Knock-out, p. 309).
- Bagnall-wild Elimination Tournament can truly decide the first three places: First place — Regular Winner; Second place — winner of a knock-out among teams defeated by the first-place winner (except the defeated finalist) who then plays the defeated finalist; Third place — winner of a knock-out among teams defeated by the

- runners-up plays the loser of the second-place match (NCERT §Bagnall-wild, pp. 310-311).
- Single League / Round Robin: each team plays every other team once; total matches = $N(N - 1)/2$ (for 7 teams = 21); Double League: every team plays twice with every other team; total matches = $N(N - 1)$ (NCERT §League Tournament, pp. 311-312).
 - Merits of Single League: decides the true winner; more matches; helps in ranking; teams need not wait for completion of other matches. Demerits: requires lot of time and facilities; teams defeated often lose interest (NCERT §Merits/Demerits of League, pp. 311-312).
 - Methods of drawing fixtures for Single League: Cyclic Method (fix 1 for even N, fix Bye for odd N, rotate the others clockwise) — total rounds = $N - 1$ for even N, and N for odd N; Tabular Method ($N+1$ columns for even, $N+2$ for odd) and Staircase Method — its drawbacks are that it does not indicate the number of rounds and matches of rounds are not easy to fix (NCERT §Method of Drawing Fixture for Single League, pp. 312-314).
 - Method of deciding winners in league tournaments — points awarded: Win = 2, Draw = 1 each, Loss = 0; team with maximum points is winner; ties broken by federation rules (NCERT §Method of deciding winners, pp. 314-315).
 - Combination Tournament — used when matches are on group/zonal basis; variants: (a) Knock-out cum Knock-out, (b) Knock-out cum League, (c) League cum League, (d) League cum Knock-out; recommended for Inter-School tournaments in district/ state/zone to save time and money (NCERT §Combination Tournament, pp. 315-317).
 - Challenge Tournaments — conducted for Badminton, Table Tennis, Squash etc.; can run during any specified period without a fixed schedule; helps select the best player in individual/dual games. Two types: Ladder Tournament (a player can challenge only the player immediately above; winner takes the higher rung; player on top at the end wins) and Pyramid Tournament (a modified ladder; a player at a given rank must first beat someone in his own rank before challenging anyone in the rank immediately above) (NCERT §Challenge Tournaments, pp. 318-319).
 - International Competitions discussed: First Ancient Olympic Games — 776 BC; sequence of 293 Olympics ended in 394 AD (Emperor Theodosius). Modern Olympics founded by Baron Pierre de Coubertin, first held Athens (Greece) 1896; not held in 1916, 1940, 1944 due to World Wars. IOC formed 25 June 1894, HQ Lausanne (Switzerland) (NCERT §Olympic Games, p. 320).
 - Winter Olympic Games started at Chamonix (France) in 1924 (NCERT §Winter Olympic, p. 321). Paralympic Games started in Rome (Italy) in 1960; International Paralympic Committee (IPC) — founded 22 September 1989, based in Bonn, Germany (NCERT §Paralympic Games, p. 321).

- Commonwealth Games — founded by Melville Marks Robinson; first held in 1930 at Hamilton (Canada); named "Commonwealth Games" from 1978 Edmonton (Canada) onwards (NCERT §Commonwealth Games, p. 322).
- Asian Games — inaugural in New Delhi, India in 1951; held every four years (NCERT §Asian Games, p. 323).
- National Games — early ones called Indian Olympic Games, started 1924 at Lahore; renamed National Games from IX Games in Bombay (1940); National Games on Olympic lines started 1985 in Delhi (NCERT §National Games, p. 324).
- Inter University Tournaments in India started in 1941; SGFI (School Games Federation of India) formed December 1954 — organises U-14, U-17 and U-19 categories; only school boys/girls below 19 years can participate (NCERT §Inter University & SGFI, p. 325).

2.2 Definitions to memorise

Term	Definition	Page
Tournament	A competition held among different teams in a particular game/sport according to a fixed schedule where a winner is decided.	300
Bye	A privilege given to a team by which it is not required to play the first round and enters the second round directly (used when N is not a power of 2).	301
Seeding	Sorting of strong teams and fitting them into the fixture so they do not meet in earlier rounds.	303
Special Seeding	Placing top players/teams directly into Quarter Finals or Semifinals.	304
Consolation Tournament	Tournament in which teams defeated in the regular knock-out get another chance to play for subsidiary honours.	306
Double Knock-out	Tournament in which a team must be defeated twice to be eliminated; total matches = $(2N - 2)$ or $(2N - 1)$.	309
Single League	Each team plays once with every other team; matches = $\frac{N(N - 1)}{2}$.	311
Double League	Each team plays twice with every other team; matches = $N(N - 1)$.	312
Ladder Tournament	Challenge tournament in which a player can challenge only the player immediately above him in the ladder.	318
Pyramid Tournament	Modified ladder in which a player must first defeat someone in his own rank before challenging the rank immediately above.	319
Knock-out cum League	Combination — group stage by knock-out, finals by league	315

Term	Definition	Page
League cum Knock-out	Combination — group stage by league, finals by knock-out	316
Bagnall-Wild	Knock-out variant that truly decides first three places	310
Cyclic Method	League drawing method — fix 1 (even) or Bye (odd) and rotate	312
Tabular Method	League drawing — (N+1)/(N+2) columns with blocked diagonal	313
Staircase Method	League drawing — drawback: doesn't show rounds explicitly	314
IOC	International Olympic Committee, 25 Jun 1894, Lausanne	320
IPC	International Paralympic Committee, 22 Sep 1989, Bonn	321
SGFI	School Games Federation of India, Dec 1954 — U-14, U-17, U-19	325
Modern Olympics founder	Baron Pierre de Coubertin	320
Commonwealth Games founder	Melville Marks Robinson	322

2.3 Diagrams / processes to remember

- Single Knock-out fixture for 8 teams — Round I/II/III bracket, Upper Half = Lower Half = 4 teams, matches = 7 (p. 301).
- Single Knock-out fixture for 10 teams — 6 byes (16 - 10), 3 byes each half (p. 302).
- Single Knock-out fixture for 11 teams — Upper Half $(N+1)/2 = 6$, Lower Half $(N-1)/2 = 5$, Upper Half byes 2, Lower Half byes 3 (p. 302).
- Single Knock-out fixture for 24 teams with Special Seeding of 4 — seeds at positions 1, 12, 13, 24; 12 byes (p. 305).
- Consolation Round (Type I) fixture for 13 teams; Type II Method 1 fixture for 16 teams without byes and Fixture of 11 teams with byes (pp. 306-309).
- Double Knock-out — 10-team regular and consolation fixture (pp. 309-310).
- Bagnall-wild fixture for 12 teams (regular + consolation rounds for first three places) (pp. 310-311).
- Cyclic Method fixtures for 5 and 6 teams (rotate clockwise around fixed 1/Bye) (p. 312).
- Tabular Method fixtures for 7 and 8 teams (N+1 / N+2 columns, diagonal blocked) (pp. 313-314).
- Staircase Method fixture for 7 teams (p. 314).
- Pyramid diagram with 4 ranks: A (1), D G (2), C M L (3), H K F S (4) (p. 319).

2.4 Common confusions / NTA trap points

- $N - 1$ vs $N(N - 1)/2$ vs $N(N - 1)$: single knock-out vs single league vs double league — students often interchange them.
- Bye order: the first bye goes to the **Bottom of Lower Half**, NOT the top — second bye is the Top of Upper Half (p. 303). NTA loves this ordering.
- For odd N , the **Lower Half** gets the extra bye $(N+1)/2$ — students often place the extra bye in the Upper Half.
- Bagnall-wild "can truly decide the **first three places**" (not just the champion) — a frequent decoy in MCQs (p. 310).
- Total matches in Consolation Type II = $2N - 3$ (not $2N - 1$ — that is a Double Knock-out variant) (p. 309).
- Modern Olympics founded by **Baron Pierre de Coubertin** (not by IOC); Commonwealth Games founded by **Melville Marks Robison** — both are commonly swapped in distractors.
- Paralympic Games started in **Rome 1960**; IPC founded **22 September 1989** in **Bonn, Germany** — not Lausanne (Lausanne is IOC HQ, p. 320 vs p. 321).
- Inaugural Asian Games — **New Delhi 1951**, not Tokyo or Manila.
- SGFI organises age groups U-14, U-17, U-19; only below 19 years are eligible.
- Cyclic Method rounds: **$N - 1$ for even N , N for odd N** . Easy reversal.
- Ladder vs Pyramid challenge tournaments — in Ladder you challenge the rung immediately above; in Pyramid you must first beat someone in your own rank before challenging the rank above.
- League winner points: **Win = 2, Draw = 1, Loss = 0** — common confusion with the football-style 3-1-0 system used elsewhere.
- Combination tournaments are recommended for **Inter-School** tournaments (district/state/zone) to save time and money.
- Number of rounds: 5–8 teams → 3 rounds, 9–16 → 4, 17–32 → 5, 33–64 → 6, 65–129 → 7.
- Ancient Olympics ended in **394 AD** under Emperor Theodosius after 293 editions; modern revival by Coubertin in **Athens 1896**.

2.5 Key concepts table — formulae, founders and tournament formats

#	Concept / formula	NCERT detail	Page
1	Single Knock-out matches	$N - 1$	301
2	Single League matches	$N(N - 1) / 2$	311
3		$N(N - 1)$	312

#	Concept / formula	NCERT detail	Page
	Double League matches		
4	Consolation Type II matches	$2N - 3$	309
5	Double Knock-out matches	$(2N - 2)$ or $(2N - 1)$	309
6	Bye formula	Next-higher power of 2 – N	301
7	Upper/Lower half (even N)	$N/2$ each	302
8	Upper/Lower half (odd N)	$(N+1)/2$ / $(N-1)/2$	302
9	Bye distribution odd Nb	Lower half gets extra $(Nb+1)/2$	302
10	Bye order	LH-bottom, UH-top, LH-top, UH-bottom	303
11	Rounds 5–8 teams	3 (2^3)	303
12	Rounds 9–16 teams	4 (2^4)	303
13	Rounds 17–32 teams	5 (2^5)	303
14	Rounds 33–64	6 (2^6)	303
15	Special seeding	Seeded teams enter directly at QF/SF	304
16	Special seeding bye example	24 teams + 4 seeds $\rightarrow 32 - 20 = 12$ byes	304
17	Bagnall-Wild	Decides first 3 places truly	310
18	Cyclic Method	Rotate clockwise; rounds = $N-1$ (even) / N (odd)	312
19	Tabular Method	$(N+1)$ cols even / $(N+2)$ cols odd	313
20	Staircase Method	Limited — doesn't show rounds explicitly	314
21	League points	$W = 2, D = 1, L = 0$	314
22	Combination tournament use	Inter-school district/state/zone	315
23	Ladder Tournament	Challenge only rung immediately above	318
24	Pyramid Tournament	First beat own-rank, then challenge above	319
25	Ancient Olympics	776 BC, Olympia; 293 editions ended 394 AD	320
26	Modern Olympics	Coubertin, Athens 1896; IOC 25 Jun 1894, Lausanne	320
27	Olympic gaps	1916, 1940, 1944 (World Wars)	320
28	Winter Olympics	Chamonix, France 1924	321
29	Paralympic Games	Rome, Italy 1960; IPC 22 Sep 1989, Bonn	321

#	Concept / formula	NCERT detail	Page
30	Commonwealth Games	Melville Marks Robinson; Hamilton, Canada 1930; renamed 1978 Edmonton	322
31	Asian Games	New Delhi 1951; every 4 years	323
32	National Games	Started 1924 Lahore as "Indian Olympic"; renamed 1940 Bombay; Olympic-style from 1985 Delhi	324
33	Inter-University Tournaments	India, started 1941	325
34	SGFI	Dec 1954; U-14, U-17, U-19; eligibility under 19	325

2.6 Extended discussion — formula bank, fixture mechanics, international ecosystem

This topic packs **the most concentrated set of formulae in CUET PE**. Burn the formula table into memory and you will pick up six to nine guaranteed marks per attempt.

Knock-out family. Single = $N - 1$ matches. Byes = next power of 2 above N , minus N . The byes go in a specific order — LH-bottom, UH-top, LH-top, UH-bottom — and when there is an odd number of byes, the Lower Half receives the extra. The number of rounds is the smallest integer such that $2^n \geq N$: 3 rounds for ≤ 8 teams, 4 for ≤ 16 , 5 for ≤ 32 , 6 for ≤ 64 , 7 for ≤ 128 . Special seeding subtracts the seeded teams from N before computing byes.

Consolation and Double Knock-out. Consolation Type II = $2N - 3$ matches; Double Knock-out = $2N - 2$ or $2N - 1$. Bagnall-Wild is the gold standard for **truly** deciding the first three places — a key distinction examiners exploit by asking "which tournament truly decides the first three places?"

League family. Single League = $N(N - 1) / 2$; Double League = $N(N - 1)$. Points: Win = 2, Draw = 1, Loss = 0. Three drawing methods — Cyclic (fix 1 or "Bye" and rotate the rest clockwise; $N - 1$ rounds for even N , N rounds for odd N), Tabular ($N + 1$ columns for even, $N + 2$ for odd; diagonal blocked) and Staircase (less common; doesn't display rounds easily).

Combination tournaments are recommended for **inter-school** events conducted at the district, state and zonal levels. The four common combinations — Knock-out cum Knock-out, Knock-out cum League, League cum Knock-out, League cum League — let organisers balance speed (knock-out) against fairness (league).

Challenge tournaments are used for individual sports such as Badminton, Table Tennis and Squash. Ladder lets any player challenge the player immediately above; the winner climbs the rung; the player on top at the end wins. Pyramid is a modified Ladder requiring same-rank victory before challenging up.

The international ecosystem is the fact-recall climax. Ancient Olympics: 776 BC at Olympia, 293 editions, ended 394 AD under Emperor Theodosius. Modern revival: Baron Pierre de Coubertin, Athens 1896. IOC: 25 June 1894, headquartered in Lausanne (Switzerland). Olympic gaps: 1916, 1940, 1944. Winter Olympics: Chamonix, France 1924. Paralympics: Rome 1960; IPC formed 22 September 1989 in Bonn, Germany. Commonwealth Games: founded by Melville Marks Robinson; first held at Hamilton, Canada in 1930; renamed "Commonwealth Games" from Edmonton 1978. Asian Games: inaugurated at New Delhi in 1951, held every four years. National Games: started 1924 at Lahore as "Indian Olympic Games"; renamed at the IX Bombay edition in 1940; relaunched on Olympic lines from 1985 at Delhi. Inter-University Tournaments started in India in 1941. SGFI was formed in December 1954, organises U-14, U-17 and U-19 categories with eligibility restricted to school students below 19. The CUET examiner almost always picks one founder, one venue, one date and one body from this paragraph and frames a single MCQ.

Practice MCQs

PYQ Alignment

Tournaments and Competitions is among the most fertile chapters for CUET Physical Education — across 2023-25 the paper has carried 6-9 MCQs every year from this material, with heaviest weight on formulae ($N - 1$, $N(N - 1)/2$, $2N - 3$, bye calculation), procedure of giving byes/seeding/special seeding, and direct factual recall on founders and venues (Coubertin, Robinson, Hamilton 1930, Rome 1960, Chamonix 1924, IPC Bonn 1989, IOC Lausanne 1894, inaugural Asian Games 1951 New Delhi, SGFI age categories). Match-the-following and assertion-reason questions on tournament classification are also recurring.